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BY PATH AND TRAIL

William Richard
DEAN HARRIS, 1847-

PUBLISHERS
CHICAGO NEWSPAPER UNION
CHICAGO
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TO
MY DEAR FRIEND
REV. ROBERT KER
RECTOR OF ST. CATHARINES AND CHAPLAIN TO THE 19TH REGIMENT
I DEDICATE THIS RECORD OF MY TRAVELS
"BY PATH AND TRAIL"

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BOOK I.

IN THE LAND OF THE YAQUI

A SHORT TALK WITH THE READER

The romance and weird fascination which belong to immense solitudes and untenanted wilds are fading away and, in a few years, will be as if they were not. The intangible and the immaterial leave no memories after them.

The march of civilization is a benediction for the future, but it is also a devastation before which savage nature and savage man must go down. Unable or unwilling to adapt himself to new conditions and to the demands of a life foreign to his nature and his experience original man of North America is doomed, like the wild beast he hunted, to extinction.

For centuries he stubbornly contested the white man's right to invade and seize upon his hunting grounds; he was no coward and when compelled, at last, to strike a truce with his enemy, he felt that Fate was against him, yielded to the inevitable and—all was over. In the Bacatete mountains, amid the terrifying solitudes of the Sierras of Northern Mexico, the Yaquis—last of the fighting tribes—is disappearing in a lake of blood and when he is submerged the last dread war-whoop will shriek his requiem. It will never again be heard upon the earth.

The lonely regions of our great continent, over which there brooded for unnumbered ages the silence which was before creation, are disappearing with the vanishing Indian; a new vegetable and a new animal life are supplanting the old now on the road to obliteration. The ruin is pathetic, but inevitable.

So before the old shall have entirely vanished, it is well that we should look upon what yet remains and hand down to an unprivileged future a description and a verbal photograph of what the country was in days gone by. Lower California, Sonora and the illimitable pine forests of the Chihuahua Range of the Sierras Madres yet remain in their primitive isolation and magnificent savagery, but, before our century expires, the immense solitudes, the unbroken desolation of wilderness and the melancholy fascination which belong to the lonely desert and towering mountain and to sustained and unbroken silence will be no more. *Vale, vale, aeterne vale*—good-by, good-by for evermore. W. R. H.

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YAQUI FIGHTERS OF THE BACATETE MOUNTAINS.

CHAPTER I.

ORIGIN OF THE FIGHTING YAQUIS.

The "Gran Barranca" of the Urique river in southeastern Sonora is one of the greatest natural wonders of the earth. "And where is Sonora?" In a northern corner of the territorially great republic of Mexico, just south of the line separating Arizona from Mexico and washed on its western limits by the waters of the Gulf of California, is the state of Sonora. Its scenic wonders, its superb climate, its mineral and agricultural possibilities will eventually place it in the front rank with the greatest and richest states of the Mexican republic. As yet it is practically an unsettled land and almost unknown to the Mexicans themselves. It awaits development, but promises a liberal return on invested capital. The Cananea copper mines are now attracting widespread interest, but while the smeltings of these mines and the mines themselves are rich, it is well known that many other prospected and as yet unopened regions contain superior ore of inexhaustible richness and abundance. Owing to the almost insurmountable difficulty of freighting machinery and shipping the ore these mines cannot now be operated on a paying basis. Gold, silver, copper, lead, onyx, marble, hard and soft coal have been found and are known to exist in large deposits, converting Sonora into a veritable storehouse of nature. The lowlands and broad valleys of the state yield two crops a year, and these semi-tropical lands grow and mature nearly all the fruit and vegetable varieties of the tropical and temperate zones. Like the Garden of Eden, Sonora

is watered by five beautiful rivers, and when irrigation is more generally introduced and the river wealth of the land utilized, the districts of Hermosillo, Mayo, Altar, Magdalena and above all, the Sonora Valley, will outrank in luxuriant vegetation, productiveness and richness of soil many of the marvelously fertile lands of Lower Mexico.

Still, the development of all these mineral and agricultural resources has been slow and is yet very much retarded by a combination of natural and hitherto unsurmountable obstacles. To construct durable bridges over the chasms, to tunnel giant hills, cut beds into the faces of adamantine mountains and build railroads into the great mining districts of the Sierra Madre, call for such a prodigious expenditure of money that the state and capitalists hesitate and move slowly.

But the absence of modern methods of transportation has not been the only drawback to the development of Sonora, nor, indeed, the most serious one. Amid the lofty mountains and rugged hills of this wild region, the last of the fighting tribes of the American Indians has built his Torres Vedras—the fort of the broken heart and desperate hope—is making his last stand and fighting his last battle. You have heard of the Yaquis, the war hawks of the wilderness, the mountain lions of the Sierra Madre, the tigers of the rocks. They are all these in their desperate courage, in their fierceness, in their endurance and treachery, in their cunning and despair.

In this desolation of wilderness, behind impregnable rocks, these fierce men have fought the soldiers of Spain and the rangers of Mexico to a "standstill." These are they who say to Mexico, "Until you make peace with us,

until you grant our conditions, until you settle with us, no Mexican, no American will work the mines or till the soil in our land."

And who are these men who challenge the strength of Mexico? Who and what are the Yaquis? Before coming to Sonora I endeavored to inform myself on the history of this extraordinary tribe, for, like the Roman Terence, whatever is human interests me—"*homo sum, humani nihil a me alienum puto.*" I had read in the American and Mexican newspapers, from time to time, terrible things about this mountain tribe. I read in "El Mundo," a Mexican paper of the date of February 28, 1907, that "a Yaqui Indian who had just emptied a fifteen-pound can of cyanide of potassium into the municipal waterworks reservoir at Hermosillo was caught in the act and shot by the authorities. A new terror is added to the situation in the Sonora country since the Yaquis have learned the deadly nature of the poison which is so largely used in mining operations and is so easily accessible to desperadoes like the Yaquis." Late in December, 1907, I read in another paper published in Torin: "A marauding band of Yaquis entered the village of Lencho, killed six men and two women and wounded four other Mexicans. As soon as the firing was heard at Torin, three miles from where the massacre occurred and where 2,000 troops are stationed, General Lorenzo Torres took the field in pursuit of the Yaquis. The soldiers will remain out until the Indians are killed or captured." Killed or captured! Well, for 400 years of known time the Spanish or Mexican troops have, with occasional periods of truce, been killing and capturing this solitary tribe, and strange to relate the warriors of the tribe will not stay killed or captured. On June 12,

1908, a Guaymas morning paper published this dispatch: "A special from Hermosillo, says 4,000 Mexican soldiers under the personal command of Gen. Lorenzo Torres, are in the country in hot pursuit of the Yaqui Indians. All negotiations looking toward the signing of the peace treaty were suddenly broken off this afternoon. The Yaquis insisted on retaining their arms and ammunition, after having acceded to every other stipulation of the Mexican government. The Mexican officers stood steadfast, and the Yaquis withdrew from the conference. Immediately orders were dispatched to the Mexican troops in the field to resume hostilities. It is not believed that the campaign will last long as the Mexican troops have all the water holes in the Yaqui country surrounded."

For the past fifty years, on and off, the Mexican soldiers in battalions, companies and isolated commands have been chasing through the mountains these stubborn and half-civilized fighters. In the few last years the Yaquis have become more dangerous and daring, more cunning in their methods of attack, and as they are now armed with modern rifles they are a most serious menace to the progress and development of central and southern Sonora.

Who, then, are the Yaquis? Back in the days when the race, known to us as the American Indian, was the sole owner of the two great continents of North and South America, an immense region, in what is now northwestern Canada, was possessed by a great nation known as the Athasbascan, from which the territory of Athabasca and the great river flowing through it take their names. One division of this numerous nation are known to-day as Tinnes or Dínnés, and may have been so called in

those early days. For some cause unknown to us, a tribal family, numbering perhaps a thousand, quarreled with their kinsmen or became dissatisfied with their lands, separated from their brothers and went in quest of new hunting grounds. They crossed a continent, passing in peace through the lands of other tribes and cutting a passage for themselves through hostile nations. They arrived at last, it may be in a hundred, two hundred years, in the land now known as New Mexico and Arizona, possessed and tilled by an agricultural and peaceable people, differing in customs, manners, superstitions, and in origin and language. They decided to settle here. The Zuni, Moki, Yumas—call them what we may—contested the right of the Dínnés to live in their country. The invaders, compared to the established nations, were few in numbers, but they were trained fighters. They were lanky men of toughened fibre and muscle, the sons of warrior sires who had fought their way through tribe, clan and nation, and willed to their sons and grandsons their only estate and property, courage, endurance, agility, strategy in war and cunning in the fight. The Dínnés, let us call them by their modern name the Apaches, woefully outclassed in numbers by the people upon whose lands they had intruded, were wise. Fighting in the open, if they lost but ten men in battle and the Zuni and Moki lost forty, in the end the Zuni and Moki must win out. The Apaches took to the mountains. The Zuni had no stomach for mountain fighting. The Apaches raided their villages, attacked like lions and disappeared like birds. They swept the Salt River valley clean and where at one time there was a sedentary population of 50,000 or 60,000 there was now a desert. Those of the original owners who escaped fled

to the recesses and dark places of the Grand canyon or to the inaccessible cliffs where the Spaniards found them and called them "burrow people," and where hundreds of years afterward the Americans discovered them and christened them "cliff dwellers."

There are no records on stone or paper to tell us when these things happened; there is no tradition to inform us when the Dínnés entered the land or when the devastation began. We only know that when the Spaniards came into Arizona in 1539, the "Casa Grande," the great house of the last of the early dwellers, was a venerable ruin.

The Apaches now increased and multiplied, they spread out and divided into tribes. One division traveled south and settled along the slopes of the Bacatete mountains and in the valley of a river to which they gave their name. When this settlement took place we do not know, we only know that when Father Marcos de Nizza entered Sonora, the first of white men, in 1539, this tribe of the Apaches called themselves Yaqui, and possessed the land. So now you can understand why the Spaniards found the Yaquis tough customers to deal with and why the Mexicans after sixty years of intermittent war have not yet conquered them. The Yaqui claims descent from the wolf, and he has all the qualities and characteristics of the wolf to make good his claim.

Centuries of training in starvation, of exposure to burning heat, to thirst, to mountain storms and to suffering have produced a man almost as hardy as a cactus, as fertile in defense, as swift of foot and as distinctly a type of the wilderness and the desert as his brother, the coyote.

From the earliest Spanish records we learn that this

fierce tribe resisted the intrusion and settlement in their country of any foreign race. One of the conditions of a treaty made with them by the early Spaniards permitted the exploitation of the mineral wealth of the country. Villages were built and camps established from time to time, but when the Yaquis or Mexicans broke the peace, these camps and towns were left desolate.

It is impossible, for one who has not seen Sonora to imagine the ravages wrought in a country for which nature has done so much.

The name "Infelix"—unhappy—given to it by the early missionary fathers, in sympathy with its misfortunes, was portentous of its miseries. The ravages of the Yaquis were everywhere visible a few years ago, and in many places, even to-day, the marks of their vengeance tell of their ferocity. By small parties and by secret passes of the mountains they sweep down upon, surprise and attack the lonely traveler or train of travelers or a village, slaughter the men and carry off the women and children. Then, in their mountain lairs and in the security of isolation, the mothers are separated from their children and the children incorporated into the tribe, and in time become Yaqui mothers and Yaqui warriors. This is the secret of the vitality and perpetuity of the Yaqui tribe. If it were not for this practice of stealing children and incorporating them into the tribal body, the Yaquis would long ago have been annihilated. Marcial, Benevidea, Bandalares, prominent Yaqui chiefs, were child captives and many of their council and war chiefs are half-breeds. And now here is an extraordinary, and, perhaps, an unprecedented fact in the history of the human race outside of the Ottoman empire. Of the Indians warring against a civilized and

a white nation, one-third are whites, one-half half-castes and many of the rest carry in their veins white blood. On the other hand, the civilized troops who now, and for the past fifty years, have been waging war on the Yaquis, following them to their haunts, hunting them in the fastness of their mountain, are all Indians and half-breeds.

CHAPTER II.

ON THE WAY TO THE BARRANCA.

To the traveler from the northern and eastern regions of America, Mexico is and always will be a land of enchantment. Its weird and romantic history, its unfamiliar and gorgeously flowering vines, its thorny and mysteriously protected plants called cacti, its strange tribes of unknown origin, its towering mountains, volcanoes and abysses of horrent depths prepare the mind for the unexpected and for any surprise. Still, the staggering tales I heard here, at Guaymas, of the wonders of the Gran Barranca and the matchless scenery of the Sierra Madre gave me pause. The Sierras Madres are a range of mountains forming the backbone of Mexico, from which all the other ridges of this great country stretch away, and to which all isolated spurs and solitary mountains are related. This stupendous range of mountains probably rose from the universal deep, like the Laurentian granites, when God said "let there be light, and light was," and will remain till the Mighty Angel comes down from heaven and "swears by Him that liveth forever, that time shall be no more."

From the breasts and bosom of this tremendous range rise mountains of individual greatness, towering one above the other. Here are sublime peaks of imperishable material that lift their spires into ethereal space, and whose snow roofed sides receive and reflect the rays of an eternal sun. Here, also, are horrent gorges which terrify the gaze—vast abysses where there is no day and where eternal silence reigns; dead volcanoes whose cra-

ters are a desolation of emptiness and whose sides are ripped and gashed down to the very foothills, black with lava and strewn with scoriae. Of the time when these mighty hills belched forth flame and fire, reverberated with explosive gases, and the crash of the elements that rocked the earth and sent down scoriac torrents which devoured life and overwhelmed and effaced valleys no tongue may speak. Through that part of the wonderful Sierra dividing the states of Chihuahua and Sonora, flows, through depths immeasurable to man, the Urique river, whose flow when in flood is an ungovernable torrent, and when in repose is a fascination.

Thousands of years ago the streams and rivulets formed by the thawing of the mountain snow on the Sierra's crests and slopes zigzagged, now here, now there searching a path to the sea. On their seaward race they were joined by innumerable recruits, springs issuing from the crevassed rocks, brooks stealing away from dark recesses, runlets, rills and streamlets, till in time the confederate waters became a formidable river which conquered opposition and fought its way to the sea. This is the Urique, and for untold ages there has been no "let up" to its merciless and tireless onslaught on the porphyritic and sandstone walls that in the dark ages challenged its right to pass on. Through these formidable barriers it has ripped a right of way, and into their breasts of adamant it has cut a frightful gash of varying width and, in places, more than a mile deep. This awful wound is known as the Gran Barranca, and with its weird settings amid terrifying solitudes is, perhaps, the greatest natural wonder in America.

I have visited the Grand Canyon of Arizona, and am familiar with Niagara Falls and its wondrous gorge, but

now, that I have returned after passing eight days amid the towering peaks, the perpendicular walls, the frightful abysses, the dark and gloomy depths of precipitous canyons, and, above all, the immense and awful silence of the Great Barranca, I confess I feel like one who has come out of an opiate sleep and doubts he is yet awake.

From the quaint and tropical town of Guaymas on the Gulf of California—still called by the Mexicans the Gulf of Cortez—I began my journey for the Gran Barranca. Accompanied by a Mayo guide I joined, by invitation, the party of Don Alonzo Espinosa, who, with his son and daughter, was leaving to visit his mine in the La Dura range. With us went four rifle bearing Yaquis, Christianized members of the fierce mountain tribe that has given and is yet giving more trouble to the Mexican government than all the Indians of the republic.

The distance from Guaymas to the Gran Barranca is about 200 miles, and it is idle to say that through these rough mountain lands, there are no railroads, no stages, nor indeed facilities for travel save on foot or mule back. Noble and serviceable as the horse may be, no one here would dream of trusting his life to him on the steep and narrow trails of the Sierras. The small Mexican burro or donkey is as wise as a mountain goat, as sure of foot as a Rocky Mountain sheep, and when left to himself will, day or night, safely carry you by the rim of the most dangerous precipice. We left Guaymas at 4 a. m. At Canoncito we met a train of loaded burros driven by men cloathed in zarapes, white cotton pants and sombreros, and, like ourselves, taking advantage of the early morning and its refreshing coolness. Now and then we passed a solitary "jackal" or hut from whose door yelling curs sallied forth to dispute our right of

way. We were now entering the land of the cactus, that mysterious plant so providentially protected against the hunger of bird or beast. Bristling from top to root with innumerable spines of the size and hardness of a cambric or darning needle, the Mexican cactus is a living manifestation of a prescient, omnipotent and divine personality. From the diminutive singa, which grows in waterless regions, and whose bark when chewed gives relief to the parched tongue, to the giant Suhauro towering to the height of forty or fifty feet, and whose pulp holds gallons of water, the cactus in its 685 species or varieties is a marvel of diversity and a fascinating study for the botanist.

At 10 o'clock we halted for breakfast at the home of Signor Mathias Duran, an old and hospitable friend of Don Alonzo. Here I noticed with pleasure and edification the survival of an old Spanish greeting which has outlived the vicissitudes of time and modern innovations.

Mr. Duran was standing on his veranda shouting a welcome to his friend, who, dismounting, shook hands with his host and exclaimed: "Deo gratias" (thanks be to God) and Duran, still holding his guest's hand, spoke back: *"Para siempre benidito sea Dios y la siempre Virgin Maria; pase adelante, amigo mio."* (Forever blessed be God and the holy Virgin Mary; come in, my friend.) To me, coming from afar, this language sounded as an echo from the Ages of Faith, and I marvelled at the colloquial piety and childlike simplicity of these cultured and valiant gentlemen. Late that afternoon we entered the tribal lands of the Yaquis, and our armed escort now became somebodies and began to preen themselves on their courage and vigilance. And they were no ordinary men, these civilized Yaquis. On a long journey

they would wear down any four men of the Japhetic stock. Of sensitive nostril, sharp ear and keen eye, nothing of any import passed unnoticed, and if it came to a brush with Mexican "hold-ups" or mountain bandits these Indian guards could be trusted to acquit themselves as brave men.

Half of the fierce and one time numerous Yaquis were long ago converted to Christianity by Spanish priests and have conformed to the ways of civilized man. They work in the mines, cultivate patches of ground and are employed on the few rancherias and around the haciendas to be found in Sonora. Others are in the service of the government, holding positions as mail carriers and express runners. In places almost inaccessible to man, in eeries hidden high up in the mountains, in cul-de-sacs of the canyons, are mining camps having each its own little postoffice. The office may be only a cigar box nailed to a post, or soap box on a veranda, but once a week, or it may be only once a month, the office receives and delivers the mail. Night or day the Yaqui mail runner may come, empty the box, drop in his letters, and, like a coyote, is off again for the next camp, perhaps thirty miles across the mountains. Clad only in bullhide sandals and breechclout, the Yaqui mail bearer can outrun and distance across the rough mountain trails any horse or burro that was ever foaled. Don Alonzo tells me—and I believe him—that, before the government opened the road from Chihuahua to El Rosario, a distance of 500 Spanish miles (450 of ours) a Tarahumari Indian carried the mail regularly in six days, and after resting one day, returned to Chihuahua in the same time. The path led over mountains from 4,000 to 6,000 feet high, by the rim of deep precipices, across bridgeless

streams and rivers, and through a land bristling with cacti and thorny yucca.

Nor will this extraordinary feat seem incredible to readers familiar with Prescott's History of Mexico. It is recorded by the historian that two days after the landing of the Spaniards on the eastern coast of Mexico, pictorial drawings of the strangers, of their ships, horses, mail and weapons were delivered into the hands of Montezuma by express runners, who covered the distance from Vera Cruz to the Aztec capital—263 miles—in thirty-six hours. In that time they ascended from the ocean 8,000 feet, traversing a land broken with depressions and ravines and sown with innumerable hills, barrancas and aroyos.

As we advanced, the trail grew ever steeper, ever rougher, ever more confused by the inexplicable windings and protruding elbows that pushed out from the granite walls as if to challenge our advance. How the ancient, angry waters must have roared through these narrow passages when the torrential rains were abroad on these high peaks, and the swollen streams, leaping from ledge to level, swelled the rushing flood! Above our heads there rose three thousand feet of porphyritic rock, but we had no consciousness of it, no foreboding of danger, no fear, no chill.

We were now in a gorge of the Bacatete mountains, where, a year ago, the Yaquis ambushed and slaughtered the Meza party, leaving their mangled bodies in this narrow gorge between Ortiz and La Dura. The report of the massacre was brought to Ortiz by an Indian express runner, who passed through the defile at break of day and identified the bodies. Senor Pedro Meza, a wealthy mine owner and one of the most prominent men

in the district, accompanied by his wife and daughters, Senoritas Carmen, Elvira, Eloisa and Panchetta—six-Senoritas Carmen,Elvira,Eloisa and Panchetta—sixteen, eighteen, twenty and twenty-three years—left Guaymas early one morning for La Dura. At Ortiz they halted for refreshments, where they were joined by Senor Theobold Hoff, his wife and son, a young man twenty-three years old. There was apparently no reason for alarm, for the Mexican troops and the Yaqui warriors were fighting it out eighty miles to the east.

When the Indians ambushed them, the men of the party charged desperately up the slope to draw the Yaquis' fire, shouting to the ladies to drive on and save themselves. The women refused to abandon the men, and when a company of Mexican Rurales (mounted police) arrived on the scene, Pedro Méza, his family and guests were numbered with the dead.

As I propose in another place to give a brief history of this formidable tribe, I confine myself here to the statement that the Yaquis are now and have been for the past three hundred years, the boldest and fiercest warriors within the limits of Mexico and Central America.

I passed the night under the friendly roof of Don Alonzo, and early the next morning with my Mayo guide and companion continued my journey to the Gran Barranca. Far away to the southeast towered the volcanic mount, the Sierra de los Ojitos, whose shaggy flanks and heaving ridges are covered with giant pines, and on whose imperial crest the clouds love to rest before they open and distribute impartially their waters between the Atlantic and the Pacific, through the Gulfs of Mexico and California.

The trail now becomes steeper and narrower, carrying us through an inspiring panorama of isolated mounts, huge rocks and colossal bowlders standing here and there in battlemented and castellated confusion. Stretching away to the south and extending for hundreds of miles, even to the valley of Tierra Blanca, was the great coniferous or pine forest of the Sierras Madres, the reserves of the paleto deer, the feeding grounds of the peccary or wild hog and the haunts of the mountain bear and the jaguar or Mexican spotted tiger. This great pine range is the largest virgin forest in North America, and for unnumbered ages has reposed and still reposes in its awful isolation.

In the early Miocene age, when God was preparing the earth for the coming of man, this immense wilderness was the feeding ground of mighty animals now extinct and, at a later period, of the fierce ancestors of those now roaming through the desolation of its solitude. The decay of forest wealth and the disintegration of its animal life eternally going on have superimposed upon the primitive soil a loam of inexhaustible richness. Unfortunately there is no water to river its timber, but when the time comes, as come it will, when its produce can be freighted, this forest will be of incalculable commercial value to Mexico, and as profitable to the republic as are her enormously rich mines.

The mountains, isolated cones and the face of the land, as we proceeded, began to assume weird and fantastic shapes. Wind and water chiseling, carving and cutting for thousands of years, have produced a panorama of architectural deceptions bewildering to man. These soulless sculptors and carvers, following a mysterious law of origin and movement, have evolved from

the sandstone hills an amazing series of illusions and have cut out and fashioned monumental designs of the most curious and fantastic forms. Here are battlements, towers, cathedrals, buttresses and flying buttresses. Away to our left are giant figures, great arches and architraves, and among heaps of debris from fallen columns there is flourishing the wonderful madrona or strawberry tree, with blood-red bark, bright green and yellow leaves, and in season, covered with waxen white blossoms, impossible of imitation on wood or canvas.

The wild turkeys are calling from cliff to cliff and the wilderness is yielding food to them. The intense silence weighs upon the soul, the stupendous hills bear to the mind a sensation of awe and sublimity. I look around me and see everywhere titanic mountains roughly garbed in hoary vegetation; the vision carrys me back to a formative period before time was, "when the earth was void and empty, and darkness was upon the face of the deep; and the Spirit of God moved upon the waters and said let land appear."

And now, as we advance, the scenery suddenly becomes grander and more sublime, surpassing great in its awful solitude, its tremendous strength and terrifying size. The spirit of man, in harmony with the majesty of his surroundings and the matchless splendor of these silent monuments to God's creative power, ought to expand and grow large, but the soul is dwarfed and dominated by the sense of its own littleness in the presence of the infinite creative Mind which called from the depths and gave form to this awful materiality, and, down through the ages there comes to him the portentous call of the Holy Spirit, "Where was thou, O man, when I laid the

foundations of these hills, when the morning stars sang together and all the sons of God shouted for joy?"

Late in the afternoon we came out from a dense forest of lofty pines and at once we stood upon the very edge of the precipice and gazed into and across the "Gran Barranca." My position was on a broad rock platform overhanging the great canyon, and from it I looked down a sheer three thousand feet to where the palms and pines meet and part again. Here was the zone of separation, the pine moving up to the "*tierra fria,*" the cold land, and the palm sloping down to its own home, the "*tierra caliente,*" the hot land. The melancholy murmur of the winds ascending from the sepulchre of the silent river, flowing three thousand feet below, but made the sense of loneliness more oppressive. From the table of the mountain that sloped above me and down to the waters of the dark-red river below, was six thousand feet of almost perpendicular depth. Away to the south was the Vale of the Churches, so-called from the weird architectural monuments carved and left standing in the wilderness by the erratic and mysterious action of the winds intermittently at work for ages.

From where I was standing the mining camp of El Rosario appeared as if pitched in an open plain, but it is really on a promontory between two "barrancas" or ravines, and beyond it the land is broken and falls away in terraces till it meets the purple mountains of Sahuaripa. Indeed, the little village on this tremendous ridge is surrounded by lofty mountains. Looking down and beyond where the graceful palms have placed themselves, just where an artist would have them in the foreground of his picture, the view is a revelation. Far away is the long mountain range, gashed with ominous wounds, out

of which in season streams flow, where formidable promontories reach out, and peaks and cones of extinct craters tell of elemental wars. To my right, stretching away for miles, the land is one vast tumultuous mass of giant bowlders, of stubborn cacti and volcanic rocks. Many of these erupted rocks still carry the black marks of the fire from which they escaped in times geologically near.

How many thousands of years, we know not since these porphyritic hills were heaved up and wasted to a dark wine purple or these adamantine ledges burned to a terra cotta orange. Here, scattered along or cropping out of the faces of the towering cliffs, are metamorphic rocks and conglomerates—slates, shales, syenites and grit stones—and here and there dust of copper, brimstone and silver blown against the granite walls and blackened as if oxidized by fire. The porphyritic hills bear ugly marks upon their sides, cicatriced wounds received in the days when "the deep called to the deep and the earth opened at the voice of the floodgates."

CHAPTER III.

BATTLE OF THE ELEMENTS.

The Gran Barranca or Grand Canyon of Sonora is without contradiction one of the great natural wonders of the earth. It is not known to the outside world; it has no place in the guide books or in the geographies of Mexico, and is seldom visited by men possessed of a sense of admiration for the sublime or appreciation for the wonderful works of God. The Arctic explorer, Lieutenant G. A. Schwatka, in his "Cave and Cliff Dwellers," devotes a chapter to the awesome region, and, so far as I know, is the only writer who has ever visited and recorded in English his impressions of the great canyon and its stupendous setting.

Nor is this absence of information to be considered something surprising. Sixty years ago the Grand Canyon of Arizona was practically unknown to Europe and indeed to the United States. Few ever heard of the stupendous gorge, and of these few there were those who deemed the reports of its wonders greatly exaggerated. Indeed, Arizona itself half a century ago was an unexplored and unknown land to the great mass of the American people. Even to-day there are regions of the immense territory as savage and unknown as they were one hundred years ago. Back of the mining camps in the gulf districts and the river lands under cultivation, Sonora to-day is an unsurveyed and indeed an unexplored land. The fighting Yaquis are yet in possession of vast regions of Sonora, and until they surrender or are con-

quered by the Mexicans there will be no civilization for the state.

If we accept the Grand Canyon of Arizona as it was fifty years ago, there is not upon the earth any formation like that of the Gran Barranca. The railroad, the modern hotel and the endless procession of mere and very often vulgar sightseers, have commonized the Grand Canyon and its wonderful surroundings. The curio shops, the hawkers of sham aboriginal "finds," the obtrusive guides, the inquisitive tourist, have vulgarized the approaches to the Arizona wonder, and robbed it of its preternatural solitude, its awful isolation and weird romance. Again the exaggerated and distorted descriptions of railroad folders, of correspondents and of magazine writers, have created in the public mind perverted and unreasonable expectations impossible of realization. Take away from any of the great natural wonders of the earth the dowers and gifts of the Creator, the haze of sustained silence, the immense solitude, the entire separation from human homes and human lives, the savage wealth of forest growth and forest decay—dissolve these and, for all time, you mar their glory and matchless fascination. This is what the greed of man and his lust for gold have done for the Garden of the Gods, for the Grand Canyon and Niagara Falls. But what avail our regrets and protests? Kismet, it is fate; we must surrender to the inevitable, "and to lament the consequence is vain."

Here among these untenanted wilds, surrounded by igneous and plutonic hills of immeasurable age, the Gran Barranca of the Urique reposes in all its savage magnificence and all its primeval solitude. Never had I seen a panorama of such primitive loveliness and of

such wild and imposing appearance. The absence of all sound was startling, and the sense of isolation oppressive. Tennyson's lines in his "Dream of Fair Women," visited me:

> "There was no motion in the dumb, dead air,
> Nor any song of bird or sound of rill.
> Gross darkness of the inner sepulchre
> Was not so deadly still."

In heaven or on earth there was not a sound to break the uncanny stillness, save alone the solitary call of some vagrant bird which but made the silence more severe.

Three miles to westward were the cones of the Sierras thrown up and distorted by refraction into airy, fantastic shapes which, at times, altered their outlines like unto a series of dissolving views. Above them all, high in air, rose the Pico de Navajas, now veiled in a drifting cloud of fleecy whiteness, but soon to come out and stand clear cut against a sapphire sky. Here and there the mountains were cleft apart by some Titanic force, leaving deep, narrow gorges and wild ravines, where sunlight never enters and near which the eye is lost in the twilight of a soft purple haze. With a field glass I swept the terrifying solitude, and the landscape, expanded by the lens, now grew colossal. Around me, and afar off, in this desolation of silence and loneliness, stood in isolated majesty, weird architectural figures, as if phantoms of the imagination had materialized into stone. Huge irregular shafts and bowlders of granite and gneissoid, left standing after the winds and rains had dissolved the softer sand and limestones, assumed familiar, but in

this untenanted wilderness, unexpected examples of the builder's art. In this tumultuous land, lonely and forbidding rose "cloud capped towers and gorgeous palaces," vast rotundas, cathedral spires and rocks of shapeless forms.

Between me and the valley which bloomed with tropical life far down by the flowing waters, lay a lava lake, where tumbling waves of fire in Miocene times were frozen into frigidity, as if God had said, "Here let the billows stiffen and have a rest." Over this desolate plain of black, igneous matter, in a sky of opalescent clearness, two eagles, playmates of the mountain storm, were crossing and apparently making for the pine lands of Iquala, whose lofty peak is suffused with roseate blush long before the mists and darkness are out of the valley. Sometime in the palasozoic age, in the days when God said, "Let the waves that are under the heaven be gathered together into one place and let the day and land appear," these great mountains were heaved up, invading the region of the clouds. And the clouds resented the intrusion, and at once began an attack on the adamantine fortifications. In this war of the elements the clouds must "win out," for before the morning of eternity the clouds will have pulverized the mountains into dust. These wandering, tempest-bearing clouds, with restless energy, are ever hurling their allied forces of wind and rain against the fronts and flanks of their enemies and, with marvelous cunning, are gnawing away their porphyritic strength, cutting deep gashes in their sides, separating individual bodies and fashioning them into towering masses of isolated and architecturally wonderful formations.

The torrential rains and melting snows have rushed

down the rugged slopes and opened ghastly wounds in the sides of the mountains. These wounds are the deep gulches, the dark ravines and abysses of horrent and gloomy depths where sunlight never enters. The runlets, streams and hurrying waters were rushing to a common meeting and as they fled they left scars on the face of their enemy and the clouds were avenged. And when these fluid auxiliaries met together each one of them carried to the common center large contributions of silt and sand, spoils torn from the foe. The mountains rolled huge rocks upon their enemies, poured liquid, fiery torrents of molten masses which hardening into metallic shrouds covered the land and obliterated the courses and beds of the streams. But raw auxiliaries and recruits came from the region of the clouds, opened new channels, massed their strength, and together cut into and through the great mountains a frightful gash one mile deep and many miles long. Through this gash flows the Urique river as blood flows from a gaping wound, and as I looked down and into the dark abyss, I thought I saw Kubla Khan gazing into the gloomy depths of Anadu—

> Where Alph, the sacred river, ran
> Through caverns, measureless to man,
> Down to the silent sea.

Before, above and around me was a panorama of unsurpassed sublimity, a tremendous manifestation of the creative will of God, a co-mingling of natural wonders and elemental forces proclaiming to man the omnipotence of God and the glory of the Lord. To the material mind the land around me is "desert land, a place of horror and of waste wilderness, which cannot be sowed, nor

bringeth forth figs, nor vines, nor pomegranates,'' but to the man of meditation and of faith it is a land where the majesty of omnipotence is enthroned and the voice of Creation supreme.

From the granite spur, on which I stood, I looked upon and into the Gran Barranca, the great canyon of the Urique, into and over as grand a view of massive crags, sculptured rocks and devastation of fire and water as ever the eye of man gazed upon. Surrounded by shaggy mountains of towering height, by plutonic hills of immeasurable age and of every geological epoch, by metamorphic formations, weird and unfamiliar, the Gran Barranca reposes in majestic isolation, waiting for the highly civilized man to approach, wonder and admire. The savage who has no ideals, has no sense of that which answers and conforms to what civilized man calls the beautiful, the terrific or the sublime, and for him the creations of God have no elevating influence on the mind. The sense of the appreciation of the sublime and the wonderful in nature is acquired by culture and depends on complex associations of mental attributes. High taste for the beauties of harmony and the grand in nature, and a sensitive feeling for sound or form or color do not belong to the man with the bow, or, indeed, to the man with the hoe.

The Yaqui, who lives surrounded by the hills on which God has stamped the seal of His omnipotence, where the departing sun floods the heavens with a cataract of fiery vermilion, crimson and burnished gold and where the sky is of opalescent splendor, stares unmoved, for he has not even the pictorial sense, and so this marvelous creation of God and work of the elements still awaits the approach of admiration and of praise.

To describe the stupendous mountain landscape of the Gran Barranca itself transcends the possibilities of language. The grandeur of the panorama and the massiveness overwhelm you, and though the mind expands with the genius of the place, yet piecemeal you must break to separate contemplation the might and majesty of the great whole. Only by so doing may the soul absorb the elemental glory of the matchless scene.

CHAPTER IV.

VALLEY OF THE CHURCHES.

The greatest of American scenic painters, Thomas Moran, roamed for three months through the Grand Canyon of Arizona, making sketches of the strange formations, catching, as best he could, the play of light and shade and the glory of the sunsets when the heavens were bathed in chromatic light. He went home and finished his famous painting, "The Grand Canyon of the Colorado River." His canvas was hung in the capitol at Washington—the highest recognition of his genius his country could confer upon him—yet Moran proclaimed that it was impossible for man to paint the splendor of the canyon when the heavens, at times, are turned to blood.

I have already mentioned that the porphyritic mountains still bear the marks of elemental wars, of gaping wounds opened in the Titanic combats of past days. These are the deep ravines, the narrow fissures and strange openings left when the mountains were wedged asunder, or when torrential storms broke upon the great hills and, forming into rivers, tore their way to the lowlands.

In those remote times, gases of enormous power of expansion were imprisoned in the wombs of these mountains, then air and water entered, the gases became combustibile and were converted into actual flames, till the rocks melted and the metals changed to vapors and the vapors liquefied and, expanding in their fierce wrath,

burst asunder the walls of their mountain prison and fought their way to freedom. Then, amid the roar of escaping steam, the gleam of lightning and the crash of thunder, the molten mass in riotous exultation rushed down the body of the monstrous hill, hissing like a thing alive and flooding the land with fire and smoke. Some awful cataclysm such as this must have occurred in the time and in the land of the patriarchs, in the days when Isaiah spoke to God, reminding him of the past, "When thou didst terrible things, which we looked not for. Thou camest down and the mountains flowed down at thy presence."

But the dominating feature of the terrifying scene was not so much its transcendent majesty and isolation as its air of great antiquity. Turning and looking up I saw a vast structure of adamant, of black gnessoid, shale and shist, traversed by dykes of granite that were old when the waters of the great deep submerged the domes of the highest mountains. Gazing upon these mighty hills, hoary with age, I asked aloud the portentous question of Solomon: "Is there anything of which it may be said, see, this is new; it hath already been of old time which was before us?" The measuring capacity of the mind is unequal to the demands of such magnitude, for there is here no standard adjustable to the mind; perspectives are illusive, distances are deceptive, for yonder cliff changes its color, shape and size as clouds of greater or lesser density approach it. It seems near, almost unto touch, yet the finger-stone which you throw toward it falls almost at your feet, for the cliff is full two miles beyond you. From the floor of the canyon to the summit of yonder hill is twelve times the height of the tallest monument in America. To acquire a sense of intimacy

with this Barranca, a mental grasp of detail and a perception of its immensity, you must descend the sides of the granite rock which walls the awful depths. To the man who possesses the gift of appreciation of the terrific in nature, the prospect is a scene of surpassing splendor. The panorama is never the same, although you think you have examined every peak and escarpment.

As the angle of sunlight changes there begins a ghostly procession of colossal forms from the further side, and the trees around you are silhouetted against the rocks, and the rocks themselves grow in bulk and stature.

Down toward the lowlands I saw things, as if alive, raise themselves on the foothills. These are the giant Suaharos, the Candelabrum cacti and beside them was the yucca, a bread tree of the south, whose cream white flowers shone across the snakelike shadows of the strange cacti. The sepulchral quiet of the place, the conscientiousness of the unnumbered ages past since time had hoared those hills and the absence of life and motion filled me with sensations of awe and reverence.

When darkness shrouds this region and storms of thunder and lightning sweep across it, penetrating the cavernous depths of the great gorge, and revealing the desolation and frightful solitude of the land, it would be a fit abode for the demons of Dante or the Djins of the southern mountains of whom the woods in other days told terrible tales. No man, after his sensations of awe have vanished and his sense of the sublime in nature is satisfied, may continue to gaze upon the scene around him, and yet admit that his mind has done justice to the magnificence and glory of this panorama of one of the supremest of earth's wonders. To absorb its

splendor the mind must become familiar with the genius of the place, recognize the influence of the winds and storms on the softer material, perceive the variations of colors, forms and trees, till, expanding with the spirit of the mountains, the soul itself has grown colossal or

> Till, growing with its growth, we thus dilate
> Our spirits to the size of that we contemplate.

With my Mayo guide I camped that night on the granite platform high up on the Gran Barranca. We saw the sun descend behind the great hills, the fleecy clouds, suspended and stationary, take on the colors of the solar spectrum, the stars coming out, and then—at one stride came the night. Early next morning we began the descent to the Valley of the Churches. The path was narrow and steep, around rocks honeycombed with water or eaten into by zoophytes. It twisted here and there, through precipitous defiles, where the jagged spurs and salient angles of the huge cliffs shoved it dangerously near the rim of the precipice. We continued to descend, our path winding around rocky projections, across arroyos formed by running water in the rainy season, skirting the danger line of the abysses, till early in the afternoon when we entered the mesa or table land, where, in a huge basin reposes "La Arroyo de las Iglesias"—the vale of the churches. It is a labyrinth of architectural forms, endlessly varied in design, and at times painted in every color known to the palette, in pure transparent tones of marvelous delicacy—a shifting diorama of colors—advancing into crystalline clearness or disappearing behind slumberous haze.

The foliage had assumed the brilliant colors of sum-

mer, and from the mesa, midway between the mountains and the valley of the Urique, the season was marking, on a brilliant chromatic scale, the successive zones of vegetation as they rose in regular gradations from the tropic floor. The atmosphere had the crystalline transparency which belongs to mountain air, and through it the scenery assumed a vividness of color and grandeur of outline which imparted to the mind a sense of exaltation,

"Till the dilating soul, enwrapt, transfused
Into the mighty vision passing there
As in her natural form, swelled vast to heaven."

The appearance instantaneously disclosed was that of an abandoned city, a wilderness of ruined buildings left standing in an endless solitude. It was a phantom city within which a human voice was never heard, where coyotes and foxes starved and where scorpions, tarantulas and horned toads increased and multiplied.

The land around was broken into terraces, and looked like a city wrecked by the Goths and long ago abandoned. For here was a forest of cathedral spires, of towers, great arches and architraves, battlements, buttresses and flying buttresses, dismantled buildings and wondrous domes. There are times, as the sun is declining, when these domes and cathedral towers glow with sheen of burnished gold or repose 'neath a coloring of soft purple or a mantle of fiery vermilion.

And how did these weird and ghostly monuments originate, who raised them in this wilderness and when were their foundations laid?

Here is the story as it was told to me. When a mass or body of air becomes very warm from the direct rays

of a blazing sun or by contact with the hot sand of a great plain, it looses moisture and rapidly ascends to higher regions in the heavens; then other and much colder air from the sea or surrounding land rushes in to fill the void, and as this new atmospheric sea rolls its great waves into the stupendous space partially left vacant by the disappearing hot air, sand and grit are taken up and, with violent force and velocity, carried against a projecting cliff of soft material, separating it from the parent body; or again, a great sandstone hill may stand solitary and alone in melancholy isolation surrounded by hills of lesser height and magnitude. Then, year after year and century after century, these sand blasts cut a little here and a little there, till in time these spectral forms stand alone, and from afar, resemble in their desolation the ruins of a long-deserted city.

This vast amphitheater, with its great forest of monuments and weird structures, surrounded by volcanic cones and walled in by towering monuments is a part of the great Barranca. You now perceive that you are in a region of many canyons, and that the whole face of the country is covered with wounds and welts, and with sharply outlined and lofty hills of gneiss and quartzite springing from the floor of the valley. Beyond contradiction, earthquakes and volcanoes at one time shook this place with violence. Only by the aid of an airship may the Gran Barranca be seen in its majestic entirety, for much of it lies buried in the vast and gloomy abyss through which the silent river flows and to which direct descent is impossible.

CHAPTER V.

FRIEND OF THE MOUNTAINEER.

When I passed out of the Arroyo of the Churches, it was well on in the afternoon and the sun beat intensely hot upon the steep trail, while the whole atmosphere was motionless and penetrated with heat. No man, experienced in mountain trails, would trust his life down these precipitous windings to the best horse that ever carried saddle. The long suffering "burro" or donkey, with the pace of a snail and the look of a half fool, may be a butt for the slings and arrows of outrageous fortune in animal histories; he may be ridiculed and despised in cities and on the farm, but in the mountains, amid dangerous curves and fearful, dipping trails the donkey is king of all domestic animals.

The burro is not, as Sunday school books picture him, the clown and puppet of domestic beasts. He is the most imperturbable philosopher of the animal kingdom, the wisest thing in his own sphere in existence, and the best and truest friend of the mountaineer. He is a stoic among fatalists, a reliable staff in emergencies and an anchor of hope in dangerous places. Like the champion of the prize ring, Joe Gans, or the sporting editor's "king of the diamond turf," Cy Young, the donkey "neither drinks, nor smokes, nor chews tobacco;" in a word, he's a "brick."

The greatest avalanche that ever thundered down the sides of the Matterhorn, the loudest detonation of volcanic Vesuvius, the roll and heave and twist of Peruvian earthquake; any one of these or all of them "in damna-

ble conspiracy'' could not turn a hair on the hide of his serene equanimity. No mountain goat, leaping from rock to rock, can give him pointers. He is contentment and self-possession personified; he will eat and digest what a mule dare not touch and will thrive where a horse will starve. Work? I have seen hills of fodder moving on the highway and thought with Festus that too much learning had made me mad, till on closer examination I perceived, fore and aft of these hills, enormous ears and scrawny, wriggling tails and under the hills little hoofs, the size of ordinary ink bottles. Down the dangerous mountain trails his head is always level, his feet sure as those of flies and his judgment unerring. His muscles and nerves are of steel, his blood cool as quicksilver in January, and his hold on life as tenacious as that of a buffalo cat. But more than all this, the burro is one of the pioneers and openers of civilization in Mexico and the Southwest. Patiently and without protest or complaint he has carried the packs of the explorers, prospectors, surveyors and settlers of uninhabited plateaus and highlands. With his endurance, his co-operation and reliability, it became possible to profitably work the silver mines of Mexico and the copper mines of Arizona. He helped to build railroads over the Sierras and across the plains and deserts of New Mexico, California and Arizona. He brought settlers into New Mexico, into Arizona and the Pacific lands, and with settlers came progress and development, peace, education and prosperity. Therefore, all hail to the burro! In grateful recognition of his kindness to me I owe him this commendatory tribute. He has done more for civilization in these lands than many a senator in the halls of the capitol or LL. D. from the chair of Harvard.

We descended to the land of "Las Naranjos," of the orange orchards and banana groves, and as the sun was setting entered the picturesque and ancient town of Urique. Founded the year Champlain first sailed the St. Lawrence and eight years before the Pilgrim Fathers landed on Plymouth rock. Urique has never known wagon, cart, carriage or bicycle. Its archaic population of 3,000 souls, mostly Indians and Mexican half-castes, has few wants and no ambition for what we call the higher life. If the wise man seeks but contentment, peace and happiness in this world, these primitive people are wiser in their generation than we. I must confess that among the civilized and half civilized races of Mexico I found a cheerful resignation and more contentment than I expected. Unprejudiced study of their social and domestic life leads me to believe that there is here a much more equitable distribution of what we call happiness than in much busier and more brilliant life centers. The fertility of the arable land, the continuously warm climate, the abundance of wild and domestic fruit and the simple life of the people are bars to poverty and its dangerous associations. It would be well for many of us if we could change places with these people, drop for a time the life of rush and hurry and artificial living into which we of the North have drifted, and take up this dreamy, placid and uneventful existence. We deplore what we are pleased to term their ignorance, but are they not happier in their ignorance than we in our wisdom, and are not we of the North, at last, learning by experience the truth of what Solomon said in the days of old, "For in much learning is much grief, and he that increaseth knowledge increaseth sorrow."

The delightful little gardens and patches of vegeta-

ble land stolen from the mountain present a dozen contrasts of color in the evergreen foliage of the tropical trees and vegetable plants. The red river of the Urique, after emerging from the great canyon, flows gently and placidly through the peaceful village. The river is not truly a deep, clay red—not the red of shale and earth mixed—but the red of peroxide of iron and copper, the sang-du-boeuf of Oriental ceramics. Rushing over irregular beds of gravel and boulders and by rock-ribbed walls, it cuts and carries with it through hundreds of miles red sands of shale, granite and porphyry, red rustings of iron and grits of garnet and carnelian agate.

The evening of the next day after entering the quaint and picturesque town, I stood on a ledge overlooking the narrow valley and again saw the long, snake-like shadows of the Suaharos creeping slowly up the side of the opposite mountain. The air was preternaturally still and was filled with the reflected glory of the departing sun. The sky to the east was like a lake of blood, and under it the ancient mountains were colored in deep purple and violet. The sun was an enormous ball of fire floating in the descending heavens and above it were banks of clouds through which flashes of bloody light came and at times hung to their fringes. Just before the sun plunged behind its own horizon its light penetrated the motionless clouds in spires, and when the sun dipped and was lost, the spires of glory quivered in the heavens and waves of red and amber light rolled over the atmospheric sea. Sharply outlined to my right was the mountain rising above the Urique like a crouching lion and holding in its outstretched and open paw the unknown and attractive little village.

It is only nine of the night, but all lights are out and

the village sleeps. My window is open, I can hear the flow of the Urique, and as I listen to its gurgling waters a cock crows across the river. The crow of the cock changes my thoughts which carry me back three years, and bear me to a room of the "seaside cottage" in the negro town of Plymouth, Montserrat, West India Islands. Unable to sleep I am seated at my open window looking out upon the tragic waters of the Caribbean sea. The moon swings three-quarters full in a cloudless sky, the air I breathe brings to me a suspicion of sulphur escaping from the open vents of La Soufriere, the volcanic mount rising to the west and dangerously near the negro village. I can hear the wash of the waves combing the beach and see the "Jumbo lights" in the windows of the negro cabins to remind the ghosts of the dead and the demons of the night that friends are sleeping there. It is 2 o'clock in the morning, a sepulchral quiet possesses the uncanny place, when—the cock crows. Then from out a large hut, down the shore street, there comes a negro well on in years, followed by a young negress, two women and three men. They do not speak, nor shake hands, they exchange no civilities, they separate and disappear. Who were they? Snake worshipers. Great Britain owns the island and British law prohibits, under penalty, the adoration of the serpent. Stronger than the law of Great Britain is the law of African superstition and the fear of the demon that dwells in the white snake, so reverently guarded and fed by the family who live in the hut. Again the cock crows. Where am I? Oh, in Urique. There is no noticeable difference in the crow of the cock the world over. This friendly bird from over the Urique river warns me it is getting late. I must to bed, so, "Good night to Marmion."

CHAPTER VI.

THE RUNNERS OF THE SIERRA.

If there be any state in the Republic of Mexico about which it is difficult to obtain accurate or exact statistics, it is Sonora. Populated largely by Indians and miners, scattered over the whole state and immune to the salutary influence of law, it is difficult to take its census or bring its population under the restraining checks of civilization. Hermosillo, with its 25,000 people, is numerically and commercially the most important town in Sonora. It is 110 miles north of Guaymas. The harbor of Guaymas is one of the best on the Pacific coast, it is four miles long, with an inner and outer bay, and will admit ships of the heaviest tonnage, and could, I think, float the commerce of America. The Yaqui river, of which I will have occasion to write at another time, enters the Gulf of California, called the Gulf of Cortez by the Mexicans—eighteen miles below Guaymas. The Sonora flows through the Arizipa valley, which is known as the Garden of Sonora on account of its incomparable fertility. Formerly it was dominated by the terrible Yaquis, and a few years ago the depopulated villages and ranches were melancholy reminders of the ruthless vengeance of these ferocious men.

The Sonora river valley, with its wealth of rich alluvial land, its facilities for irrigation and adaptation to semi-tropical and temperate fruits and cereals, will eventually support a great population.

That the valley and adjacent lands were in ancient days occupied by a numerous and barbaric—not savage—

race, there can be no doubt. Scattered over the face of the country are the remains of a people who have long ago disappeared. Many of the ruins are of great extent, covering whole table lands, and are crumbling away in groups or in single isolation. Unfortunately, no documents are known to exist to record the traditions of the ancient people before the Spanish missionary fathers first began the civilization of the tribes 400 years ago. When the early Jesuit missionaries were called home, the archives and everything belonging to the missions were carried away or destroyed. It is, however, possible that a search through the libraries of the Jesuit and Franciscan monasteries in France and Spain may yet reward the historian with some valuable finds.

From an examination of the sites and the ruins, scattered here and there in the Sonora valley, I am satisfied that the ancient dwellers were a sedentary and agricultural people; that they were of the same race as the Moki and suffered the same fate as that picturesque tribe, and from the unsparing hand of the same merciless destroyers, the Apache-Yaquis. Long before the time of Cortez the evil fame of the unconquerable Yaquis had settled around the throne of the Montezumas. There is a tradition that after the spanish chief had stormed the City of Mexico and made a prisoner of the Aztec ruler, Montezuma said to him: "You may take possession of all my empire and subdue all its tribes—but, the Yaqui, never." To-day the Sonora valley is wet with the blood of slaughtered settlers. Formerly these fierce men confined their depredations to the Sonora valley and the Yaqui river regions, but the members of the tribe are now scattered over northern and central Sonora, the fighters, however, live in the Bacatete mountains and

parts of the Sierras. One-half of them are partially civilized and are peaceable, the other half continue to wage a guerrilla war in the mountainous regions. These mountaineers are men of toughened fibre, of great endurance and inured to the extremes of heat, cold, and hunger. They have no fear of anything or anybody, except the spirits of evil, which bring disease and calamities upon them, and the "shamans," or medicine men, who act as infernal mediators between these demons and their victims.

Their wild, isolated and independent life has given to the Yaquis all those characteristic traits of perfect self-reliance, of boldness and impatience of restraint which distinguish them from the Mayos and other sedentary tribes of nórthern Mexico. Born in the mountains, they are familiar with the woods and trails. No coyote of the rocks knows his prowling grounds better than a Yaqui the secrets of the Sierra wilderness. Like the eagle, he sweeps down upon his prey from his aerie amid the clouds, and, like the eagle, disappears.

His dorsal and leg muscles are withes of steel, and with his dog—half coyote, half Spanish hound—he'll wear down a mountain deer. With the possible exception of his neighbor and kinsman, the Tarahumari of the Chihuahua woods, he is, perhaps, the greatest long distance runner in America.

Occasionally, friendly contests take place between the noted athletes of the two tribes. Six years ago a Tarahumari champion challenged one of the greatest long-distance runners of the Yaquis. In a former contest the Yaqui runner won out. He covered 100 Spanish miles, equal to 90 of ours, over hilly and broken ground, in eleven hours and twenty minutes. Comparing this per-

formance with those of civilized man in ancient and modern times, the Yaqui, all things considered, wins the laurel crown. Pliny records that Anystrs, of Sparta, and Philonedes, the herald of Alexander the Great, dividing the distance between them, covered 160 miles in twenty-four hours. Herodotus tells us that Phieddippides, the pan-Hellenic champion, traversed 135 miles over very rocky territory, and in gruelling weather, in less than two days, carried to Sparta the news of the advancing Persians. He almost attained an apotheosis in reward for his endurance, showing that, even among the athletic Greeks the feat was deemed an extraordinary performance. History also credits Areus with winning the Dolichos, of two and a half miles, in a fraction less than twelve minutes, at the Olympic games, and straightway starting on a homeward run of sixty miles, to be the first to bear the joyous news to his native village. In recent times, Rowell, of England, in 1882, traveled 150 miles in twenty-two hours and thirty minutes, and Fitzgerald, in Madison Square Garden, went, in 1886, on a quarter-mile circular track, ninety miles in twelve hours. Longboat, the Oneida Indian from the Brantford reservation, Canada, won the Boston Marathon, twenty-six miles, in two hours and twenty-four minutes. These modern feats, however, were performed over carefully prepared courses and ought not to take rank with the rough mountain and desert races of the Yaquis and Tarahumaris.

The race of six years ago was run over the same course as the former, and was the same distance, that is, ninety miles. Piles of blankets, bridles and saddles, bunches of cows, sheep, goats and burros were bet on the result, and, when the race was over, the Yaqui braves

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TARAHUMARI INDIANS, NORTHERN MEXICO

were bankrupt. The night before the event the Indians camped near the starting line, and when the sun went down opened the betting. An hour before the start, the course was lined on each side with men two miles apart. Precisely at 4 in the morning the racers, wearing bull-hide sandals and breech-clouts, or, to be more accurate, the G string, toed the mark and were sent away, encouraged by the most extraordinary series of hi-yi-yiis, yells, shrieks and guttural shouts ever heard by civilized man. The path carried them over rough ground, along the verge of deep precipices, over arroyos or old river beds, across arid sands. Every two miles the runners stopped for a quick rub down and mouth wash of pinola or atole, a corn meal gruel. Then with a "win for the Yaquis" or "the Humari women already welcome you," whispered in his ear, the runner bounds into the wilderness. Three o'clock that afternoon the men were sighted from the finish line running shin to shin, and at 3:15 the Tarahumari crossed the mark amid a chorus of triumphal yelps, retrieving the honors lost in the former contest and making his backers "heap rich." The ninety miles were run by both men in eleven hours and fifteen minutes, and considering the nature of the ground, it is doubtful if any of our great athletes could cover the distance in the same time.

In addition to his fleetness of foot and staying powers, the Yaqui is a man of infinite resources. Years of thirst, starvation and exposure have produced a human type with the qualities and developed instinct of the coyote of the desert. He is the descendant of many generations of warriors, and is heir to all the acquired information of centuries of experience, of bush, desert, and mountain fighting. There is not a trick of strategy, not

a bit of savage tactics in war, not a particle of knowledge bearing upon attack, engagement and escape, with which he is not familiar, for he has been taught them all from infancy, and has practiced them from boyhood. He is the last of the Indian fighters, and, perhaps, the greatest. The world will never again see a man like him, for the conditions will never again make for his reproduction. With him will disappear the perfection of savage cunning in war and on the hunt, and when he departs, an unlamented man, but withal a picturesque character, will disappear from the drama of human life, will go down into darkness, but not into oblivion.

What, then, is the cause of the murderous and prolonged hostility of the Yaquis to Mexican rule? Why is the exterminating feud allowed to perpetuate itself, and why are not these Indians subdued? Must Sonora be forever terrorized by a handful of half-savage mountaineers, and must the march of civilization in Sonora be arrested by a tribe of Indians?

To get an answer to these questions I asked, and obtained an interview with General Lorenzo E. Torres, commander-in-chief of the First Military Zone of Mexico. With my request I inclosed my credentials accrediting me as a person of some importance in his own country and a writer of some distinction.

Although the general's time was filled with important military affairs and another engagement awaited him, he received me with that courtesy and politeness which seem to be an inheritance of the educated members of the Latin race the world over. Though a man of full 60 years, the general appears to retain all the animation and vitality of the days when, by his impetuosity and dauntless courage, he won his brevet at Oajaca, and the

tassels of a colonel on the field of Mien. To the physical buoyancy and elasticity of younger days were now wedded the conscious dignity of high reward and the nobility of facial expression which waits on honorable age. After an exchange of introductory courtesies, I made known at once the purport of my visit.

"General, would you kindly give me some information about the Yaquis? In my country we have heard the evidence of one side only, and that was not always favorable to the Mexican government. We would be pleased to know the truth, so as to be able to form a just and impartial judgment." The general very obligingly proceeded to satisfy my request.

"The feud with the Yaquis," he smilingly replied, "goes back many years. The trouble began in the days of the conquest of Mexico. In 1539, when the Spaniards first crossed the Mayo river, and penetrated the lands of the Yaquis, they found them entrenched on the banks of the Yaqui river, awaiting the advance of the Europeans, and ready for battle. Their chief, robed in the skin of a spotted tiger, profusely decorated with colored shells and the feathers of the trogon, stepped to the front of his warriors, drew a line upon the ground and defied the Spaniards to cross it. The Spanish captain protested that he and his men came as friends; they were simply exploring the country, and all they asked for or wanted was food for themselves and horses.

" 'We will first bind your men and then we will feed your horses,' was the answer of the Yaqui chieftain. While he was yet speaking he unwound a cougar lariat, and advanced as if he intended to rope the Castilian officer. This was the signal for a hot engagement, which ended in the retreat of the Spaniards. Later, in 1584,

Don Martinez de Hurdiade tried to conquer them, and was defeated in three separate campaigns. However, strange to relate, in 1610, the Yaquis, of their own accord, submitted to the Crown of Spain.''

''Are they braver and better fighters, general, than the other tribes now at peace with the republic?'' ''I think they are,'' replied Don Lorenzo. ''Mountaineers are everywhere stubborn fighters. At any rate, for the past fifty years they have given us more trouble than all the Indians in Mexico and Yucatan. Don Diego Martinez, in his report, made mention of the indomitable bravery and cunning strategy of the Yaquis of his time. In his 'Relacion,' or report of his expedition, he said that no Indian tribe had caused him so much trouble as the Yaqui. After their submission, in 1610, they stayed quiet until 1740, when they again broke out. The rebellion was quenched in blood, and for eighty-five years they remained peaceful. Then began a period of intermittent raids. The years 1825, 1826 and 1832 were years of blood, but the Yaquis were, at last, subdued and their war chiefs, Banderas and Guiteieres, executed. In 1867 they again revolted, and were again defeated, but despite all their defeats, they were not yet conquered.

''They led a semi-savage life in the Yaqui valley, but were always giving us trouble, raiding here and there. The majority of them would seemingly be at peace, but human life was always more or less in danger in and near the Yaqui district.

''Isolated bands of them lived by plunder, raiding, foraging and murdering on the rancherias and haciendas. This condition of things was, to say the least, extremely irritating. No self respecting government can tolerate within its borders gangs of ruffians defying civ-

ilization, law and order. The federal government decided to act."

"Were you then the general in command, Don Lorenzo?"

"No, I was governor of Sonora; it was later, in 1892, that I was given command of this zone. When war again broke out between the tribe and the federal troops, the Yaquis were very daring, and numerically strong; some hot engagements took place, and the Yaquis fled to the Bacatete mountains. From these hills they swooped down upon the mines, held up the trails and mail routes, and terrorized the surrounding country. Our troops pursued them into the mountains, storming their impregnable strongholds. It took ten years of tedious and bloody fighting to reduce them and bring them to terms. We struck a peace, and to that treaty of peace the Mexican government was true, and stood by its terms and pledges. We gave the Yaquis twenty times more land than they ever dreamed of cultivating. We gave them cattle, tools and money. We fed them and furnished them seed. We have been humane to a degree undeserved by the Yaquis."

The general rose from his seat, and, for a few moments, paced the room as if in deep thought. Whether he suspected my sympathies were with the Indians or that his government was wedged in between the base ingratitude of the Yaquis and the censure of the outside world, I do not know, but he interrupted his walk, faced me with a noticeable shade of irritation on his fine face, and continued:

"I did even more; as religion has a soothing and pacifying effect upon the soul and the passions, I obtained priests and Sisters of Charity for them; I established

schools among them. But you can't tame the wolf. Notwithstanding all our kindness and friendly efforts on their behalf, the tribe revolted again two years later. With the money we gave them, and the mission funds, which they took from the priests, they purchased rifles and ammunition from American adventurers and Mexican renegades, and made for the mountains. In their flight for the hills they carried with them one of the mission priests and four of the Sisters of Charity, holding them captives for six months. This happened on July 31, 1897."

"Pardon me, general," I interposed, "but the most of us who are interested in the Mexican tribes, believe the Yaquis to be Christian."

"They have a varnish of Christianity, it is true, but this religious wash only helps to conceal a deep substratum of paganism; at heart they are heathens and hold to their old superstitions and pagan practices."

"So that, since 1897—that is to say, for ten years—the Mexican government has been at war with the Yaquis?"

"That is not the right word. The Yaquis do not fight in the open, so that no real battles are fought. In detached commands we have to follow them into the mountains, and, as they know every rock and tree of the Bacatetes, we are pursuing ghosts."

"How many Yaquis are there, Don Lorenzo?"

"There are now some 4,000 left in Sonora. The majority of these are peaceful, but sympathize with the outlaws and assist them in many ways. They all speak Spanish, dress like poor Mexicans, and as the neutral Yaquis aid and give shelter to the fighters, we must regard them all as enemies of the republic."

"So, then, there is no solution to the Yaqui problem?"

"Oh, yes, there is. We are sending them to Yucatan, Tabasco and Chiapas, with their families. There they work in the henequin or hemp fields and make a good living. Already we have transported 2,000, and unless the other 4,000 now here behave themselves, we will ship them to Yucatan also. The state of Sonora is as large as England, and cannot be covered by military troops and patrols without great expense. The Yaqui problem, as you are pleased to call it, will be solved in due time, and Sonora, when fully developed, will amaze the world with its riches and resources."

This expression of hope and faith brought my visit to a close. I shook hands with the general and took my leave of a distinguished soldier and a most courteous gentleman.

CHAPTER VII.

THE PRIEST AND THE YAQUIS.

The war between the Mexican government and the Yaquis is not conducted according to methods or practices which govern civilized nations. It partakes more of the nature of a Corsican vendetta or a Kentucky feud. It is a war of "shoot on sight" by the Mexicans, and of treachery, cunning, ambushment and midnight slaughter by the Yaquis. It is a war of extermination.

In 1861 Governor Pesquira, of Sonora, in a proclamation offering $100 for every Yaqui scalp brought in, calls them "human wolves," "incarnate demons," who deserve to be "skinned alive."

"There is only one way," writes Signor Camillo Diaz, "to wage war against the Yaquis. We must enter upon a steady, persistent campaign, following them to their haunts, hunting them to the fastness of their mountains. They must be surrounded, starved, surprised or inveigled by white flags, or by any methods human or diabolic, and then—then put them to death. A man might as well have sympathy for a rattlesnake or a tiger."

And now let me end this rather long dissertation on this singular tribe by a citation from Velasco, the historian of Sonora. I ought, however, to add that the Yaqui has yet to be heard in his defense. "Without doubt," writes Velasco, "it must be admitted that under no good treatment does the Yaqui abandon his barbarism, his perfidy, his atrocity. Notwithstanding his many treaties of peace with Mexico and the memory of what he suffered in past campaigns, yet on the first opportunity and

on the slightest provocation he breaks faith and becomes worse than before."

When I returned to Guaymas from Torin I learned that a desperate engagement between the Mexican troops and the Yaqui Indians, in the mountains southeast of this city, had taken place. I have already mentioned a raid made by the Yaquis on the railroad station of Lencho, Sonora, in which the station master was killed, four men seriously wounded and three girls swept to the mountains. Since then the Mexicans have been on the trail of the Yaquis; now and then exchanging shots, with an occasional skirmish, but not until the day before yesterday did the enemy and the Mexican troops come to close quarters. One cannot place much confidence in the wild reports now circulated on the streets of Guaymas. A Mayo runner, who came in with dispatches this morning, is reported to have said that the Mexicans lost twenty men in the battle, and that many of the wounded were lying on the field, still uncared for, when he left. He says the Yaquis were defeated, but as they carried away their dead and wounded when they retreated, it was not known how many Yaquis were killed. Owing to the inaccessible nature of the country and its remoteness from here, we do not expect further particulars until to-morrow. If the Yaquis had time to carry off their dead and wounded, depend upon it, the Mexican troops gained no victory. I had a talk this afternoon with a governmental official, who had no more information than myself, about the engagement. He declared in the course of our conversation that it was the purpose of the national government and of the state of Sonora to exterminate the Yaquis, and that the troops would remain in the mountains till the last of the Yaquis was bayoneted

or shot. When I ventured the remark that the authorities of Mexico said the same thing forty years ago, have been repeating it at measured intervals ever since, and that the Yaquis seem to be as far from annihilation as they were in Spanish times, he became restless, rose from his seat and his color heightened. I thought he was going to vomit. I steadied him by ordering up the cigars and a bottle of tequila. He then informed me in a confidential whisper that "the Yaquis were, indeed, terrible fighters, but now it would soon be all up with them. Signor Pedro Alvarado, the owner of the greatest silver mine in Mexico and the wealthiest man in the republic, had offered to raise and keep in the field at his own expense, a regiment of Mexican 'Rurales' for the extermination of the Yaquis."

On my way from Torin to Guaymas I called to pay my respects to the priest in charge of one of the inland villages where I was compelled to pass a night. After a very courteous reception and some preliminary talk, I expressed a wish to have his views on the misunderstanding between the Mexican government and the Yaqui Indians. I adverted to my interview with General L. E. Torres, and outlined the substance of our conversation.

"Well," he began, "if an impartial tribunal, like The Hague convention, could examine the dead and living witnesses of both sides, and after sifting and weighing the result of the evidence, the scales of justice might possibly turn in favor of the Indians. It matters little now with whom the fault rests. The Yaquis cannot get a hearing, and if they could what would it avail them? It's a case of the 'race to the swift, the battle to the strong, and the weak to the wall.' When the American troops were carrying extermination to the Apaches in

Arizona, the Indians were represented in the Eastern states and Middle West as demons escaped from hell and incarnated in Apache bodies. It was madness to offer an apology for the Indians or to hint at the provocation and treatment goading them to desperation. The public voice had spoken, the case was closed—Roma locuta est, causafinita est."

"I am a Mexican, and by force of birth and family ties, am with my own people, but as a priest of God, I ought not to tread upon the bruised reed or quench the smoking flax."

"Are the Yaquis Catholics, padre mio?" I asked.

"Fully one-half of the Yaquis are as devout Catholics as any people of Mexico. The mountaineers, whose ancestors were converted to the faith, are outlaws for 200 years and retain, as a tradition, many Catholic ceremonies wedded to old pagan superstitions and practices. The fact, that when in 1898 they fled to the mountains and carried with them in their flight the parish priest and four nuns, and did them no harm, is a convincing proof that they still retain a reverence for the priesthood and for holy women."

"Then at one time the whole tribe was converted to the Catholic faith?"

"Yes, and if the greed and covetousness of politicians and adventurers had not foully wronged them, the members of the Yaqui tribe would to-day be among the best and most loyal citizens of the Mexican republic.

"As early as 1539 Father Marcos of Nizza visited the Yaquis in the Sonora valley. Ten years after Nizza's visit two Jesuit missionaries took up their abode among them. Other missionaries followed until, at the time of Otondo's expedition in 1683 to Lower California, nearly

all the tribes of Sonora and Chihuahua, including the Yaquis, were Christianized.

"They were among the first to be converted by the Jesuits. Originally extremely warlike, on being converted to Christianity, their savage nature was completely subdued and they became the most docile and tractable of people. They are invariably honest, faithful and industrious. They are also the fishermen and famous pearl-divers of the Gulf of California.

"After the Yaquis became Christians they continued to hold to their tribal unity, while many of the other tribes were merged in the older Indian population, known as 'Indios Mansós.' They yet retain their tribal laws and clanship, and it is their loyalty to these laws that has led to much of the trouble between them and our government."

"Does the Republic of Mexico recognize their status as an independent body or an *imperium in imperio*?" I asked.

"You have touched the crux of the whole question," he replied. "The Mexican government has made many treaties with the Yaquis, thus acknowledging in a measure their separate political entity, if not independence. But, when a Yaqui violates a Mexican law, the Republic demands his surrender that he may be tried and punished by its own courts, while on the other hand, if a Mexican commits an outrage on a Yaqui, our government will not admit the right of the Yaquis to try him and punish him."

"But will your government punish him?"

"If it catches him, and his crime be proved, yes; that is if he be a nobody, but if he has money or influential

friends, he's never caught, or if caught, is rarely convicted.

"The Indian does not understand this way of doing things, and he takes the law into his own hands, and then the trouble begins."

"What was the opinion of the early missionary fathers touching the Yaquis?"

"Among all the wild tribes evangelized and civilized by the Spanish priests, among the Sinoloans, Chihuhuans, Tarahumaria, Mayos and others, the Yaquis held first place, and were rated high for their morality and attachment to the faith.

"The famous Father Salvatierra, who spent ten years on the Yaqui mission; Fathers Eusebio Kino, Taravel and others, have left on record their commendations of the fidelity of the Yaquis and the cleanliness of their moral lives."

"It was a Yaqui chief who accompanied Father Ugarte when he mapped and explored Lower California. When the mission of Father Taravel of Santiago, Lower California, was threatened by the savage Perucci, the Yaquis sent sixty of their warriors to the defense of the priest and his converts. They offered 500 fighting men to protect the missions of Bija, California, provided they were called upon and transportation across the gulf furnished them. In those days they were famed for their fidelity to the Spaniards, in fact all the early writers speak kindly of them, and they were then known as the 'most faithful Yaqui nation.'

"When the missions were dissolved by the Mexican government, and the fathers compelled to abandon their posts, the Yaquis and the Mexicans quarreled. In 1825 they revolted, claiming they were burdened with heavy

taxes. Banderas, the Yaqui chief, led the uprising and won material concessions from our government. Banderas headed another rebellion in 1832, in which he was defeated and slain. The next uprising was in 1884-7, caused by encroachments on the lands of the tribe, and the present war is due to the lawless acts of the gold hunters and their contempt for the laws of the Yaqui tribe. They have the misfortune to live on the fringe of civilization, where provocation is always menacing."

"If I am not trespassing too generously on your courtesy, may I ask why the Franciscan fathers abandoned the missions in Sonora?"

"They did not abandon the missions," replied the priest, "they were exiled—I do not like to use the word expelled—from all Mexican territory after the declaration and separation of the republic from Spain. You see, party spirit, or rather, racial divergence, was very acute and rancorous in those times. When the Mexicans achieved their independence, all Spaniards, including priests, officials and professional men, were ordered to leave the country. There were hardly enough native priests to administer the canonically established parishes, and for twenty-five years the Indians of Sonora were without the consoling influence of the Christian religion or the pacifying presence of the only men who could restrain the expression of their warlike instincts."

"So you are of the opinion that if the missionaries had remained with them, the Yaquis would now be at peace with Mexico?"

"I am sure of it. In 1696, when the Jesuit superior of the 'Alta Pimeria' missions decided to send Father Eusebio Kino from Sonora to open the mission to the 'Digger Indians' of Lower California, the military gov-

ernor refused to let Father Kino go, saying that the priest had more power in restraining the Indians of the Sonora and Yaqui lands than a regiment of soldiers."

My interview with this scholarly and devout priest was abruptly brought to a close by the arrival of some visitors. With the kindness and affability which distinguish all the Mexican ecclesiastics that I have been privileged to meet, he insisted upon accompanying me to the garden gate, where with uncovered head I shook his friendly hand, and after thanking him for his gracious hospitality, bade him good-bye. On the way to my posada, or lodging house, I thought of the honors heaped upon the Romans by Macauley, and the admiration of the world for men like Horatius, who in defense of their country, rush to death, asking:

"How can men die nobler,
  Than facing fearful odds,
For the ashes of their fathers
  And the temples of their Gods?"

BOOK II.

IN THE LAND OF THE "DIGGER INDIAN"

CHAPTER VIII.

WHERE MAN ENTERS AT HIS PERIL.

Reaching out one thousand miles into the Pacific ocean, elongating itself like a monstrous thing alive, in futile attempt to separate itself from its parent continent, there is a lonely land as unknown to the world as the vast barbaric interior of Central Africa or the repellant coasts of Patagonia. Upon its unhospitable shores on the west, the sea in anger resenting its intrusive presence, has been waring for untold ages, hurling mountainous waves of immeasurable strength on its sandy beach or against its granite fortifications. At times the waters of the Gulf of Cortez, rising in their wrath, rush with fierce violence on its western flank, and the sound of the impact is the roaring of the sea heard far inland. In this war of the elements great wounds have been opened where the land was vulnerable, and indentations, inlets and deep bays remain to record the desperate nature of the unending battles of the primordial forces. This awful and vast solitude of riven mountains and parched deserts retains the name it received 350 years ago, when baptized in the blood of thirteen Spaniards slaughtered by the savages of this yet savage wilderness. This is Baija, Cal.—Lower California—a wild and dreary region, torn by torrents, barrancas and ravines, and in places, disfigured by ghastly wounds inflicted by volcanic fire or earthquake.

The exterior world furnishes nothing to compare with it. Here are mountains devoid of vegetation, extraordinary plateaus, bewildering lines of fragmentary cliffs,

a land where there are no flowing rivers, where no rain falls in places for years, volcanoes that geologically died but yesterday and whose configurations and weird outlines are impossible of description. Its rugged shores are indented and toothed like a crosscut saw. It is a land of sorrow almost deserted of man and shrouded in an isolation startling in its pitiful silence. Save the unprofitable cactus and the sombre sagebrush, friends of the desert reptiles, there is no vegetation in regions of startling sterility.

If there be upon the earth a country lying under the pall of the Isaiahan malediction, it is here; for here is the realization and accomplishment of the dread prophecy portending the blight of vegetable life. "I will lay it waste, and it shall not be pruned or digged, but there shall come up briars and thorns. I will also command the clouds that they rain no rain upon it."

Here in the vast interior loneliness of this forbidding land are horrent deserts where the traveler may ride hundreds of miles and find no water or look upon other vegetation than thorny cacti or scattered bushes of the warning greese-wood, telling him that here is death. The lonely mountains bordering these deserts are striking in their visible sterility. Torrential rains in seasons overwhelm the struggling vegetation that in the intervening months of repose invade the few inviting patches, and, rushing madly to the foothills, sweep all vegetable life before them.

Then, when the storm retires, and the blazing sun burns the very air, the porphyritic rocks become an ashen white, and, reflecting the sun's rays, throw off rolling billows of unendurable heat. Most of these repellent ranges are granite, but in many places there are found

outcroppings of gneiss, mica, talc and clay slates. They underlie the quarternary at the base of the granite hills. In some sections the levels are overlaid with the detritus from these rocks. Toward the Gulf of California the slates are accompanied by metamorphic limestones, and often appear forming independent ridges or inclining toward the high granite hills. Near the Pacific coast the land is sown with volcanic cones, broken by benches of land termed mesas, dotted with small groups of hills known as *llomas* and by long faces of rock called *escarpas*. Immense streams of lava at one time entered the deserts and now cover, as with a metallic shroud, many of the sandstone mounds. The petrified waves and eddies of the river of mineral and other organic matter, called magma, zig-zag here and there in the foothills, resembling streams of ink solidified. Here are rocks, aqueous and igneous, rocks splintered and twisted, and showings of grit stones, conglomerates, shales, salts and syenite basalt.

Here, too, are streams poisoned with wearings of copper, with salts, arsenic and borax, and vast beds of sand and gypsum covered with an alkaline crust, and dry lakes, white as snow, on whose lonely breasts the sand lies fine as dust. The weird solitude, the great silence, the grim desolation, the waste places and barren deserts accursed and forsaken of man, abandoned to the horned toad, the tarantula and the snake, terrify the soul and raise a barrier to exploration. The only drinking water to be found over an area of hundreds of miles is in rock depressions and in holes here and there in the mountains where the rain has collected in natural tanks hidden from solar rays and partially protected from evaporation. But there are seasons when, for years, no rain falls, and

then in this awesome peninsular furnace, the air is burning, the sand hot as volcanic ash, and the silence like unto that which was when God said "Let there be light." The deserts of this mysterious land are regions of sand where earth and sky form a circle as distinct as that traced by a sweep of the compass.

Into this desolation of sterility and solitude man enters at his peril, for here the deadly horned rattlesnake, the white scorpion, thirst and sweatless heat invite him to his ruin and offer a constant menace to life. If with determined purpose he dares his fate and attempts the crossing of the parched and desolate land, the white glare reflected from the treacherous sand threatens him with blindness. At times he encounters the deadly sandstorms of this awful wilderness of aridity, the driving and whirling sands blister his face and carry oppression to his breathing. If the water he carries fail him, he may find a depression half full of mockery and disappointment, for its waters hold in solution alkali, alum or arsenic, and bear madness or death in their alluring appearance.

If night overtake him and sleep oppress him, he must be careful where he takes his rest, lest a storm break upon him and bury him under its ever-shifting sands, and if he sleeps well he may never awake. And these storms are capricious, for, after welcoming the unhappy man to a hospitable grave in the desert and covering him with a mound many feet high and of liberal circumference, they are not satisfied to let him rest in peace, for, months later, it may be years, they scatter the dune and expose the mummified body. There are here no vultures to clean the bones, for the vulture is the hyena of the air and lives on putrefaction, and there is here no decompos-

ing flesh. The carcass of man or beast is dried by solar suction, the skin is parched and blackened and tightens on the bones; the teeth show white, for the lips are gone with contraction, the eyes are burned out and the sockets filled with sand, and the hair is matted, dry and sand-sprinkled. If the lonely man be so unfortunate as to escape death by suffocation, he awakes with the dawn. Dawn on the desert while the stars still glow in cerulean blue. It is a vision of transcendent beauty, for toward the east the sky is bathed in a sea of amber, light blue and roseate. The stillness is intense, illimitable, it is the preternatural.

The man has lost all appreciation of the beautiful, the divine silence has no charms for him, it suggests the grave. Twilight expands into day, the instinct of life, of self-preservation, dominates him, he rises and answers the call of the mountains which allure him by their apparent nearness. The remorseless sun times his pace with his; if he stands still, the sun stands still, if he moves forward, the sun moves forward; if he runs, the sun pursues, and to the lost man staggering in the desert it is as if the air was afire and his brain ablaze. The pallor of mental anguish and physical pain are ashening his skin; his eyes are wild and shot with blood; his features are drawn and his face is neighbor to death. And now he searches for his knife and cuts away his boots, for his feet are swollen shockingly, his hair is beginning to bleach, his gait is shambling, and the strong man of yesterday is aging rapidly. Reason, for some time, has been bidding him good-bye, and is now leaving him,—it is gone forever, and only the primal instinct of self-preservation remains with him in his horrible isolation from human aid. In this lonely wilderness the cruel sun pours

down his intolerable rays till the very air vibrates with waves of heat. Nothing moves, nothing agitates the awesome silence, there is no motion in the heavens, in the dumb, dead air, on the burning sand. The madman tries to shout, but his throat can only return a hoarse guttural, and his blackened tongue hangs out as he gasps for breath. Hunger is gnawing him, thirst is devouring him, and he does not know it. The cells of his brain are filled with fire, his body is burning; piece by piece he has torn away his clothes, and now, from throat to waist, he rips open his flannel shirt and flings it from him. His sight has left him, his paralyzed limbs can no longer support his fleshless body, and blind, naked, demented, he falls upon the desert and is dead. Who was he? A prospector. Where was he going? To the mountains. For what? For gold. He follows is as did the wise men the star of Bethlehem. It lures the feet of men and often woos the rash and the brave to death and madness.

When the prospector has achieved the conquest of the desert and reached the mountains, retaining his health and strength, he has accomplished much, but there yet remain many trials and hardships to test the courage and endurance of the brave man. Not the least of these is the wear and tear on the mind of unbroken silence and absence of all life. There is nothing that shatters courage, chills the heart and paralyzes the nerves as surely as some inexplicable sound, either intermittent or persistent. The brain that conceived the "wandering voice" struck the keynote of terror, and when Milton described the armless hand of gloomy vengeance, pursuing its victim through lonely places and striking when the terrified man thought himself within the security of darkness, he gave us one of the most awful examples of the fears of

a guilty soul overcome with helplessness and shook with nameless horror.

There are those now living in this forbidding peninsula who have dared and conquered the burning heat and trackless sands of lonely wastes, only to encounter, when they reached their goal of hope in the mountains, spectres of the imagination and the wraiths of disordered senses. Of these was Antonio Gallego, a physical wreck, who was pointed out to me shuffling across the plazuela in the town of San Rafael.

He was a fine, manly fellow in his day, earning a fair wage in the Rothschild smelter, when he took the mine fever and started for the mountains on a prospecting expedition. He was all alone, carrying his pick and shovel, water and food. A good deal of desultory wandering took him finally into a little canyon where he found a promising "outcropping," and he went to work to locate a claim. It was a desolate place, but beautiful in a way. On either side of the valley that formed the bosom of the canyon, the mountain sloped up and up, until the purple tops merged into the blue sky, while on the rock and granite-strewn acclivity no vegetation took root.

No game existed there; the very birds never flew across the place, and it was so sheltered from currents of air that even the winds had no voice. This dreadful and unnatural stillness was the first thing that impressed itself upon Gallego. Particularly at night time, when the stars glittering and scintillating as they always seem in these solitudes, jeweled the sky, he would sit at the open door of his hut, and the silence would be so vast and profound that the beating of his own heart would drum in his ear like the strokes of a trip-hammer. He was not a man of weird imagination, but unconsciously and grad-

ually an awe of the immense solitude possessed him. And little by little, as he afterward told the story, another feeling stole in upon him. The rock-ribbed gorge began to assume a certain familiarity, as though he had seen the place in other days and only partially remembered it, and he could not shake off a subtle impression that he was about to hear or see something that would make this recollection vivid.

There was no human being within a hundred miles, and often he was on the point of abandoning the claim and retracing his steps. But before he could make up his mind he struck an extraordinary formation. It was a sort of decomposed quartz, flaked and flecked with gold in grains as large as pin heads, and ragged threads that looked as if they had at one time been melted and run through the rock. Antonio knew enough to be satisfied that it would not take much of the "stuff" to make him rich, and he worked with feverish haste, uncovering the ledge. On the second day after his discovery, he was at the bottom of his shallow shaft, when suddenly he paused and listened to what he thought was the sound of a church bell. He rested on his shovel, the bell was ringing and the sound was pleasant to his ears. It reminded him of home, of the Sunday mass, and the fond, familiar church, but above all, it brought back to him the faces of the old companions and acquaintances he met in the church square Sunday after Sunday, and the veiled and sinewy forms and faces of the senoritas crossing the plaza to hear mass. How long he had been dreamily listening to the church bell he did not know, but suddenly the thought came to him that there could be no church nearer than a hundred miles. Still he could hear the bell

distinctly, faint and as if afar, yet perfectly clear. It sounded, too, like his parish bell.

Antonio sprang out of his shaft and stood listening. The sound confused him and he could not tell exactly from what direction it came. It seemed now north, now south, and now somewhere above him, but it continued to ring, reminding him it was time for mass. Then the bell ceased to ring; ah! thought the lone man, "the priest is at the altar and mass has begun."

The excitement of the mine had passed away from him as fever from a sick man. A sort of inertia crept over him and he dropped his shovel and idled for the rest of the day, thinking about the bell. As yet he was not afraid, but, that night, seated before his lonely cabin, he heard the slow, rhythmic sound of the bell once again; he felt an icy creeping in his scalp and turned sick with dread. He was afraid of the awful solitude and afraid to be alone with the mysterious sound. He knew it could be no bell, knew that it must be an hallucination, yet before it stopped, he went nearly mad.

The next time he heard it was in the afternoon of the following day. He stared about him and the old sense of familiarity returned ten-fold. The granite gorge seemed teeming with some horrible secret or a spectre was soon to appear and speak to him. He feared to look around him lest the awful thing would draw near. And now the bell begins to toll for the dead, and Antonio hears a voice from the air saying, "She is dead, she is dead." "Ah, Cara Mia," spoke the lone man, "my heart is dead within me, but I must go to your funeral and see you laid to rest, and I'll soon be with you." Still the bell kept tolling. Before it ceased, Antonio was flying out of the canyon, haggard, muttering to himself, wildly ges-

ticulating, and tears flowing down his cheeks. He made his way to San Rafael, starting up at night to hurry on, and pushing over the almost impenetrable country at such a speed that when he reached his destination he was broken down, a wreck and half demented.

At times the awful solitude, the immeasurable stillness and isolation from human homes close in upon the lonely prospector and wear down the texture of the brain. So stealthily does the enemy of sanity creep in upon the dominion of the mind, that the doomed man is not conscious, or only dreamly conscious, of its approach. In the beginning he notices that he is talking aloud to himself, then, after a time, he talks as if some one is listening to him, and presently his questions are answered by, presumedly, a living voice. Then, at his meals, going and coming from his cabin, when he is burrowing into the side of a prospect, he hears a lone voice or many voices in conversation or in angry altercation. It is no use trying to persuade himself that his imagination is imposing on his sense of hearing, the voices are too real and audible for that. Presently, lonely apparitions float in the air, mist-like and misshapen at first; then, as they approach nearer, they assume human forms, descend to the earth and begin to talk and gesticulate. Then sometimes the wraith of a dead companion appears to him, walks with him to his rude hut a mile away, talks over old times, sits with him at his meals and sleeps with him. Nor, when wind-tanned and sun-scorched, he returns to his friends, may he ever be talked out of his delusions. He has heard the voices, seen the spectres, companioned with the dead and there's the end of it. Something like this happened to Pedro Pomáro who died, a rich man, a few years ago, in the little burg of Santa

Rosilla, at the foot of Monta Reccia. He was prospecting in the Eugenia range with Alphonso Thimm, who perished of mountain fever seven weeks after they made camp. Pedro buried his friend and companion in a side of the mountain, said a "de profundis" for the repose of his soul, and returned to his lonely tent. Three days after the burial of his companion, he was examining some ore he had taken out of the shaft, when he saw Alphonso coming toward him. He dropped the sample and began to run, shouting for help. He fell at last from exhaustion and lost consciousness. When he returned to his senses, Thimm was gone and Pedro retraced his way back to his tent. The next afternoon, at about 4 o'clock, when he was working at the shaft, Alphonso again appeared, and held him by his glittering eye, as did the Ancient Mariner the wedding guest. He beckoned to Pedro to follow him and Pedro followed. The ghost led him away to the north, over rocky, broken ridges, and at last stopped. Then he took Pedro by the arm and said, "Come here to-morrow and dig." Thimm vanished, and Pedro, marking the spot the ghostly finger pointed out, dragged himself back to his tent. He awoke at noon the next day, cooked and eat his simple meal, and, shouldering his miner's pick, returned to the place shown him by his dead companion. Here he discovered and located the "El Collado" mine, which he sold to a Mexican syndicate for 30,000 pesos. Ghost or no ghost, Pedro found the mine, and from the proceeds of the sale built himself a pretentious and comfortable homse, occupied today by one of his daughters with her husband and children.

CHAPTER IX.

THE DEAD OF THE DESERT.

I was privileged last evening to be the guest of Don Estaban Guiteras and his charming family, and when it was time to renew the expression of my appreciation of his hospitality and bid him good night, I deeply regretted that Mexican etiquette forbade me to prolong my visit. Don Estaban is now in the evening of a life largely spent in deserts and mountains, and it is allotted to few men to pass through his experiences and retain a fair measure of health, or indeed, to survive. Wind-tanned and sun-scorched, he is a rugged example of indomitable courage and of unshaken determination, to whom good luck and success came when despair was riding on his shadow.

I questioned him of the desert, the mountains, the canyons, and never was boy preparing for his first communion more familiar with his catechism than was Don Estaban with the gruesome wonders of the lonely places of the peninsula.

He told me of a region where many men had died of thirst, and to which flocks of ducks and water fowl came year after year in the migratory season; of places where rain is almost unknown, yet where clouds come of a night and, breaking on some lofty peak, hurl thousands of tons of water upon the land, altering the forms and shapes of mountains, ploughing deep gorges here, and there filling others with great boulders, and changing the face of the country. He spoke of deserts where men go mad with heat, throw their canteen, half-filled with life-saving

water, out into the waste of sand, and, tearing and ripping every shred of clothing from their emaciated bodies, shout at and damn the imaginary fiends mocking them. He asked me why it was that the skulls of men, who perish of heat and thirst on the desert, split wide open as soon as life has left their trembling limbs? I answered I had never heard of the weird and singular phenomenon.

"Yes," he continued, "I have seen dead men in the Hormiga desert, and the skull of every one of them was gaping. So dry is the air of these regions, so hungry is it for the heart's blood of its victim, that no sooner do men die than the hot air envelopes them, and, like a devil-fish, sucks from their tissues, veins and arteries all blood and water. I have followed the trail of dead men by the shreds and rags, the knife, revolver and canteen flung away and torn from them in their delirium; and when I came upon their bodies, the hair was ashen gray, the skulls split open and the bodies stark naked. Of the skull, the remorseless heat makes a veritable steam chest, and when the sutured bone walls can no longer stand the awful strain, the skull splits open and the brain protrudes. I was traveling one afternoon with a companion over the Muerto desert when the braying of one of my burros called us to a halt. A walking burro never brays while the sun shines unless it sees or scents danger. Lifting my field glass I saw, far away to our left, a man evidently in distress. We altered our course, and, as we drew to hailing distance, the man, completely naked, ran to meet us, wildly gesticulating, '*Ritrarse, ritrarse*'—go back, go back—he shouted, 'the demons are too many for us, let us run, let us run.' We gave the poor fellow a few sips of water, and after a while fed him chocolate and crackers, and brought him with us. Striking out diagon-

ally across the sands, we found his canteen, three-quarters full of clear, fresh water. When his mind was giving away he sat down to rest, and, rising, strayed away, he knew not whither, forgetting his food and water."

"Why do men lose their reason in the desert?" I asked Don Estaban.

"Well," said he, "many of these men, by dissipation and evil habits in early manhood have weakened and impaired their brains. Others were born with a weak mentality, so that when the merciless heat beats down upon them, when fatigue, and often hunger and thirst, seize upon them, the weakest part of the human system is the first to surrender. Then the intense and sustained silence of the desert, the immeasurable waste of sand around them, and the oppression on the mind of the interminable desolation and solitude carry melancholy to the soul, and the weakened mind breaks down.

"It is what happens, at times, to men who go out on the desert; they perish and are heard of no more. The drifting sand covers them, and when years after their burial, a hurricane of wind races over the desert, it scatters the sand which hides them, opens the grave as it were, and carrying the bodies with it, separates the bones and drops them here and there on the bosom of the ocean of sand. A curious thing," continued Don Estaban, "happens when the strong winds blow on the desert, a something occurs which always reminds me of the continuous presence of God everywhere and of His providence. Does not the Bible somewhere speak of the birds which the Heavenly Father feedeth and the lilies of the field which He cares for? Well, the desert plants are a living proof of God's love for all created things.

"When these sandstorms are due, and before they rush

in upon the mighty waste of silence and sand, the cacti and the flower-bearing plants droop down and lie low along the earth. Then, when the storms have passed, the plants slowly, cautiously, as if to make sure their enemy is gone, rise again to their full height. Only the mesquite and grease-wood of toughened and hardened fibre refuse to bow down to the tyrant of the hurricane, and unless torn up by the roots they never yield. But the cacti, save alone the pitahaya, of giant strength, tremble at the approach of the storm, contract, shrivel up and lie low.

"I have often, in my tramps across deserts, stopped and examined a cactus which we call the 'Rodillo.' It has no roots, is perfectly rounded, and its spires or needles, for some mysterious reason, point inward, as if its enemy were within itself. Unless it draws its nourishment from the air, I do not know how it survives. It is the plaything of the winds. When the sand storm riots in the desert, the wind plays with the 'Rodillo' and rolls it along forty or fifty miles."

"How often do these storms come, senor?"

"Well, it's this way; for your winters in the North you have snow and ice, in the South they have rain; here on our deserts we have winds, and these winds are with us for three months, mild as a sea breeze to-day, and to-morrow rushing with the speed of a hurricane. But to come back to the 'Rodillo.' When the storm of wind has lifted, this ball cactus is left on the desert, and if during the vernal equinox rain falls, the plant throws out a few rootlets, gets a grip somewhere in the sand till it flowers and seeds, and is off again with the next wind."

"Is there any hope for a man if he runs short of water forty or fifty miles out in the desert?"

"A man," replied my host, "who is taught to desert

ways, never dies of thirst. An Indian will enter a desert stretching away for two hundred miles, carrying with him neither food nor water, and yet it is a thing unheard of for an Indian to go mad on the sandy waste, or die of hunger or thirst. God in His kindness and providence has made provision for man and animal, even in the great deserts. There is no desolation of sand so utterly bare and barren that here and there upon its forbidden surface there may not be found patches of the greasewood, the mesquite and the cactus. Now the cholla, and tuna, and the most of the cacti, bear fruit in season, and from these fruits the Indians make a score of dainty dishes. Even when not bearing, their barks and roots, when properly prepared, will support life. Nor need any man die of thirst, for the pitahaya and suaharo cacti are reservoirs of water, cool, fresh and plentiful. But then, one must know how to tap the stream. By plunging a knife into the heart, the water begins to ooze out slowly and unsatisfactorily, but still enough comes to save a man's life. Of course, you know that the man familiar with the moods of the desert never travels without a can, matches and a hatchet. When he is running short of water he makes for the nearest bunch of columnar cacti, as the pitahaya and suaharo are called by us. He selects his tree and cuts it down, having already made two fires eight or ten feet apart. Then he makes a large incision in the middle of the tree, cuts off the butt and the end, and places the log between the fires, ends to fires. The heat of the fires drives the water in the log to its center, when it begins to flow from the cut already made into his can. It is by this method the Indian and the expert desert traveler renew their supply of water."

Communing with myself, on the way to my hotel, I

thought, "So, after all is said and done, education is very much a matter of locality. In large centers of population the theologian, the philosopher, the scientist, is a great man; but thrown on his own resources, on the wide deserts, in the immense forests, he is a nobody and dies. On the other hand, the man bred to desert ways or trained to forest life, is the educated man in the wilderness, for he has conquered its secrets. That training, then, apart from the supernatural, which best prepares a man to succeed in his sphere, which develops the faculties demanded by his occupation or calling, which makes him an honest, rugged, manly man, is education in the best acceptance of the often ill-used term."

CHAPTER X.

THE FIGHT FOR LIFE.

Don Estaban Guiteras did me the kindness to accept an invitation to dine with me this evening and pay me a parting visit, for I leave Buena Vista to-morrow, and may never again tread its hospitable streets. He accompanied me, after dinner, to my hotel room, and after opening a bottle of Zara Maraschino and lighting our cigars, I induced him to continue the conversation along the lines traced out the evening I was his guest.

He spoke of beds of lakes on mountains 4,000 feet above the sea, and of fossil and petrified skeletons of strange fish and animals found in the beds; of the singular habit of the desert rat which, when about to die, climbs the mesquite tree and prepares its own grave in the crotch; of the desert ants, which build mounds miles apart in the desert and open an underground tunnel between them. He told of the migration of ants to the mountains, the military precision of their movements on the march, their racapity, the blight of all vegetable life after the myriad hosts had passed, and of the red and black ants and their fierce and exterminating battles. He referred to the strange ways of the "side winder," or desert rattle snake, of the wisdom of lizards and other reptiles, and of animals living and dying on the great ocean of sand, and of the skeletons of men who went mad and died alone on the wilderness of desolation.

DON ESTABAN'S STORY.

"Were you ever lost on the desert, Senor Guiteras?"

"No," he answered, "but when I was a young man and was not as well acquainted with the ways of the Disierto as I am now, I had a trying experience, and nearly lost my life.

"It was on the 'Múerto,' and I wandered ninety miles over sands so hot that I could scarcely walk on them, though wearing thick-soled shoes. The Múerto desert is in circumference 230 miles, and is, in fact, the bed of an ancient sea, which evaporated or disappeared many thousands of years ago. During the months of July and August the Múerto is a furnace, where the silence is oppressive, the glare of the ash-hot sand blinds the eyes, and the burning air sucks water and life from the body of man or beast. I left the 'Digger' camp at the foot of the Corneja mountain early in the week, intending to inspect a copper 'find' discovered by an Indian some fifty miles southwest of the Digger camp. The trail carried me through an ancient barranca, widening into a gorge which opened into a canyon, through which in season flows what is called the Rio Rata. Here I made camp for the day, cooked a meal and slept, for I had started as early as 3 o'clock in the morning. The heat within the canyon marked 90 degrees on a small pocket thermometer I carried to test the temperature of the nearest water to the reported 'find.' As the air about me carried only 10 or 12 degrees of humidity, this heat in no way inconvenienced me. At 4 o'clock that afternoon I awoke, continued on through the canyon, and in two hours entered the desert.

"You must understand that in this country no man in

his senses attempts the crossing of a great desert during the day. The sun would roast him, the sands, hot as volacnic ash, would burn him up, and he could not carry enough water to meet the evaporation from his body. For half the night I made good progress, so good indeed that I began to whisper to myself that before 8 o'clock of the morning I would strike the foothills of the Sierras Blancas and leave the desert behind me.

"Perhaps I had been pushing myself too much, or it may be that I was not in the best of condition, but about 3 in the morning I sat down to rest. I was traveling light and brought with me only enough water and food to last me fourteen hours, knowing that when I reached the Blancas I could find the mining camp of Pedro Marrila. To a meditative man, the desert at night has a charm deepening into a fascination. The intense and sustained silence, the great solitude, the limitless expansion of white sand glistening under a bright moon, and innumerable stars of wondrous brilliancy strangely affect the mind and bear in upon the soul a sensation of awe, of reverence and a consciousness of the presence of God.

"After a time, an inexpressible sense of drowsiness possessed me. I had often traveled far on deserts, but never before had I felt so utterly tired and sleepy. I remembered saying to myself, 'Just for a half hour,' and when I awoke the sun was rising over the mountains. I rose to my feet, blessed myself, and moved on, knowing I was going to have a hard fight of it.

"At 10 o'clock the heat was that of a smelting furnace. As I walked my feet sank in the yielding sand. I was very thirsty, but I could not touch the water in my canteen, treasuring it as a miser his gold. The blazing sun sucked away all perspiration, before it had time to

become sweat and collect upon the skin. To sweat would have helped me, but no man sweats in the desert. I now discarded all my clothing but my undershirt, drawers, hat and boots, even my stockings I flung upon the dry sand.

"And now, for the first time, I took a drink from my canteen, not much, but enough to partially quench the fire of my parched tongue. I had my senses about me, I retained my will, and I took the water, for I knew that my tongue was beginning to swell. At noon I struck a pot-hole, or sink, half filled with clear, sparkling water. I took some of it up in the lid of my canteen, touched my tongue to it and found it to be, what I suspected, impregnated with copperas and arsenic. My body was on fire, and thinking to obtain some relief, I soaked my shirt, drawers and shoes in the beautiful cool water, and in my wet clothes struck for the mountains, looming some twenty miles ahead of me. I was a new man, and for an hour I felt neither thirst nor fatigue.

"Then a strange numbness began to creep over my body. It was not pain, but a feeling akin to what I have been told incipient paralytics feel when the demon of paralysis has a grip on them. I sat down, drank some water, and for the first time since I left the canyon's mouth, took some food. When I tried to rise I fell over on my side, but I got up, lifted my canteen and looked around me."

"Pardon me, Don Estaban, was your mind becoming affected?"

"No, my brain was clear and my will resolute. They say hope dies hard. My hope never died, I pushed on, resolved if I must die, it would be only when my tired or diseased limbs could no longer obey my will. Ten miles,

at least, I walked, the fierce sun beating down remorselessly upon me. Walked, did I say? I dragged myself through hell, for my bones were grinding in the joints, my skin was aflame and three times I vomited. I fought the cravings of my body, for if I sat down I might never arise. Not a living thing was anywhere in sight. I believe I would have welcomed a brood of rattlesnakes, of scorpions, of tarantulas, so deathly quiet was the air around me.

"Out in the lonely desert I deliberately stripped to the nude, dipped my hands in my canteen and rubbed my body. I then, as best I could, beat and shook my shirt and drawers, for I now began to suspect I was being poisoned by the copperas and arsenic in which I had dipped my clothes. *Dios,* how hot the air was, how fiercely blazed the sun, how the burning sand threw out and into my face and eyes the pitiless glare and heat.

"I dressed, and, taking my canteen, slowly but resolutely set my face for the mountains, now nearing me. Once I fell, but in falling saved the water. With a painful effort I rose up, took a mouthful of water, and onward I went, while the firmament was cloudless o'er my head."

Don Estaban paused in his painful and fascinating narrative, took a few sips of maraschino, and said:

"I will weary you no further with the story of my awful experience in that accursed waste of sand and heat. I reached the foothills, how I scarcely know, but I lost consciousness, not my reason, and those who found me and cared for me told me they thought I was dead when they lifted me from the arroyo into which I had fallen."

"Did you ever get over the effects of that awful trip?" I asked.

"Oh, yes," he said, "in three months I was as well as I ever was. We Mexicans are tough, and if we only take care of ourselves when young, we can stand anything. You see, like the Irish, we are the sons of pure mothers, who obey the laws of God and nature."

When Don Estaban rose to depart, he took from his pocket a photograph of himself and his family, and handed it to me, saying: *"Espero que le volvere a ver a usted pronto"*—I hope to see you soon again.

I took it gratefully and tenderly from his hand, assuring him of my appreciation of his kindness, my affection and admiration for himself and his family, and promised to send him from Mexico City a copy of my "Days and Nights in the Tropics." I accompanied him to the street, and, in farewell, shook the hand of a straight and honest man, whose rugged face I may never look upon again.

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HALF-BLOOD COWBOYS, LOWER CALIFORNIA.

CHAPTER XI.

THE DIGGER INDIANS.

Although Lower California remains to-day as an awful example of some tremendous bouleversement in the Miocene age, a land of gloom and largely of abject sterility, yet it has redeeming features, and there are hopes of salvation for this gruesome peninsula. For example, there have lately been discovered on the Gulf coast large, very large deposits of sulphur, and north of La Paz, immense beds of almost pure salt. At and around the Cerabo islands, the pearl fisheries, once so productive and valuable, are again becoming promising. In the northern part of the peninsula there is much excellent grazing land, calculated at 900,000 acres, where alfalfa, burr and wild clover, and fields of wild oats, four feet long and full of grain, thrive. Along the shores of the Bay of San Marco they are now quarrying from vast beds the finest alabaster in America. At Todos Santos there are large quarries of white and variegated marble, and in the neighboring mountains great deposits of copper ore carrying much silver. At Ensenada the Rothschilds control the mines, and have erected large smelting works to reduce the ore.

Lower California has two capitals, Ensenada, on the North Pacific coast, and La Paz, far down on the gulf. The tremendous barriers of mountains and deserts between the two coasts and the distance by water around Cape San Lucas, have made two capitals a necessity. La Paz, at the head of a fine, deep bay of the same name, has a population of about 3,000, nearly all Mexicans. It

is a town of one broad, straight street, with witewashed houses of stone, one story high, tree-shaded, verandahed and jalousied. The Tropic of Cancer cuts through the San Jose valley to the south. The town and the land around it for many miles are a dream of joy. Here the orange groves stretch away for many miles on every side, bordered with rows of cocoanut palms which respond to the slightest touch of breeze, and wave their fern-shaped crowns. In the morning, when the sun is rising beyond the giant mountains, the air of the valley is vibrant with the songs of mocking birds and California magpies of many hued plumage. Here also, in the alluvian depressions, arborescent ferns with wide-spreading leaves, tower forty feet in the midst of tropical trees, whose branches are festooned with many varieties of orchids and flowering parasites of most brilliant hues.

The completion of the Panama canal will mean much prosperity to the west coast, for a railroad will then be built from Magdalena Bay to San Diego, Southern California, connecting with the Southern Pacific for New Orleans, Chicago and the East. The west coast will then probably become a great health resort, for the climate is unsurpassed and chalybate and thermal springs are everywhere. Some far-seeing Boston capitalists, anticipating a great future for this section of Lower California, have purchased the Flores estate, 427 miles long by sixteen wide. The purchase includes harbor rights on Magdalena Bay, and is the longest coast line owned by any one man or firm in the world.

The population of Lower California is about 25,000, principally Mexicans and half-castes. There are 600 or 700 foreigners engaged in mining, and some Yaqui and

Mayo Indians, pearl fishers in the large bay of Pechilinque.

To me, the most interesting and pathetically attractive members of the human race in North America are the melancholy remnants of the early tribes of Lower California withering away on the desert lands and mountain ranges, and now almost extinct. In the history of the human race we have no record of any tribe, clan or family that had fallen so low or had approached as near as it was possible for human beings to the state of offal animals, as the wretched Cochimis, or "Digger Indians," of Lower California. The Cochimis, unlike any other family or tribe of American Indians, occupied a distinct position of their own, and, indeed, may have been a distinct people. Shut off from the mainland by the Gulf of Cortez to the east, and impassable deserts on the north, they were isolated, it may be, for thousands of years from all communication with other aboriginal tribes, and until the coming of the Spaniards under Otondo, they knew nothing of the existence of any other people except, perhaps, the coast tribes of Sonora and Sinoloa. Their language and tribal dialects bore no affinity to those of the northern or southern nations. It is doubtful, indeed, if they were of the same race, for their customs, habits, tribal peculiarities and characteristics allied them rather to the people of the South Pacific Islands.

Sir William Hunter in his chapter on the "Non-Aryan Races," describes the Andamans, or "dog-faced man-eaters," as a fragment of the human race which had reached the lowest depths of hopeless degradation. After the Andamans, he classed the "Leaf-wearers," of Wissa. Dr. Kane, the Arctic explorer, thought it was not possible for human beings to fall lower in degeneracy than

the fugitive Eskimos, the "Ka-Kaaks," whom he met at "Godsend Ledge," where his ship was ice-locked and where fifty-seven of his dogs went mad from cold and died. These Indians were foul, verminized and filthy, and when he fed them raw meat and blubber "each slept after eating, his raw chunk lying beside him on the buffalo skin, and, as he awoke, his first act was to eat and the next to sleep again. They did not lie down, but slumbered away in a sitting posture, with the head resting on the breast."

These savages were compelled by the intense cold of their northern home to cloth themselves and construct some sort of shelters, and even the Wissa family, or "leaf wearers," of Sir William Hunter, yielded to an instinct of shame, but the "Digger Indians" roamed entirely naked and built no temporary or permanent shelters. Their vermin infested hair drooped long over their faces and backs; they were tanned, by unnumbered years of sun and wind exposure, to the hue of West Coast negroes, and, worst of all, they were victims of pornographic and sexual indecencies pitiful in their destructive results. A member of Otondo's expedition and colony of 1683, writing of Lower California, says: "We found the land inhabited by brutish, naked people, sodomitic, drunken and besotted."

The noble savage of Dryden and Cooper is all right in poetry and romance, but the real man, when you meet him and know him, is indeed a creature to be pitied, against whom the elements have conspired and with whom circumstances have dealt harshly. God deliver us from the man of nature, unrestrained by fear of punishment, unchecked by public opinion, by law or order, untamed by social amenities, unawed by the gospel of the

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A "DIGGER INDIAN," LOWER CALIFORNIA.

hereafter. The nearer we come to the man who has no higher law than his own will, nor knows obedience to a higher authority than himself, the nearer we come to a dangerous animal who eats raw meat, indecently exposes himself, loves dirt, hates peace, wallows in the filth of unrestrained desire and kills the weaker man he does not like whenever the temptation comes and the opportunity is present. And low as the man can fall, the woman falls lower. *"Corruptio optimae pessima"*—the corruption of the best is ever the worst—and all nature exposes nothing to the pity and melancholy wonder of man more supremely sad and heartrending that woman reduced to savagery.

The Jesuit fathers, who established sixteen missions in Lower California, beginning in 1683, sent to their provincial in Mexico City from time to time, accurate reports of the condition of the tribes and the progress of religion and civilization among them. From the letters of these great priests which, in places, bear upon the degeneracy and pitiable condition of the Lower California Indians, and the appalling degradation to which it is possible, under adverse conditions, for human beings to descend, we obtain all the information extant of these wretched tribes. Many of these letters or "Relaciones," are yet in manuscript, and to the average student of missionary history, inaccessible. The historical value of these "Relaciones" has of course been long understood by scholars, but, to the general reader, even to the educated general reader, they were and are somewhat of a myth. At a very early period their value was recognized by that great traveler and historian Charlevoix, who in 1743 wrote: "There is no other source to which we can resort to learn the progress of religion among the Indians, and

to know the tribes * * * of the Apostolic labors of the missionaries they give very edifying accounts.'' Some day, it is to be hoped, the Mexican government, following the example of the Canadian parliament, which in 1858 printed the ''Relations of the Jesuits'' in Canada, will give to the world in editional form the letters of the Jesuits in Mexico and Lower California. However, from the books compiled from these letters, such as those of Fathers Venagas, Clavigero and Verre, we obtain a most pathetic and melancholy narrative of the woeful state of the tribes before the coming of the fathers.

Apart from the divine courage and enthusiasm of the Spanish missionary fathers, nothing has excited my admiration more than the learning and scholarship of the priests sent by the Catholic church for the evangelizing of savage tribes and barbarous peoples. From an offhand study of the brutish and deplorable ignorance of many of the tribes, it would be quite reasonable to assume that men of simple faith, good health and a knowledge of the catechism of the Council of Trent, would be best adapted for the redemption of a people ''seated in darkness and in the shadow of death.'' But Rome, with her accumulated wisdom of centuries and unparalleled experience of human nature under adverse conditions, trains her neophytes destined for foreign missions to the highest possible efficiency. We are not, then, when acquainted with her methods of education, surprised to find among her priests, living amid the squalid surroundings of savagery, men of high scholarship and specialists in departmental science. Of these was Father Sigismundo Taravel, a pioneer of the California missions. In 1729 he established the mission of St. Rose, near the Bay of Palms. Before volunteering for the California

missions he was a professor in the University of Alcala, Spain, and when he entered the desert and mountain solitudes of this peninsula was in the prime of his young manhood. He was dowered with exceptional talents, and when commissioned by his superior, Father Echivari, to collect material for the history of the land and its inhabitants, he brought to the discharge of his task exceptional industry, unflagging patience and great ability. For twenty-three years he remained in Lower California, instructing and Christianizing the tribes around the Bay of Palms and visiting the most remote corners of the peninsula in quest of material for his history. He took the altitude of mountains, determined the courses of underground rivers, made a geodetic survey of the southern end of the peninsula, and gave names to many of the bays and inlets. Broken in health, he retired to the Jesuit college at Guadalajara, Mexico, where he completed his history in manuscript. From this voluminous work, Fathers Clavigero and Vinegas and less known writers on Lower California, drew much of the material for their publications.

I have entered upon this digression that you may understand the reliability and accuracy of the information we inherit bearing on the daily life and habits of a people which, I believe, to have been the most degraded known to history.

There are certain disgusting details entering into the social life and habits of this unhappy and abandoned people which I dare not touch upon. Even the barbarous tribes of Sinaloa and Sonora, from their privileged lands and hunting grounds across the gulf, looked down upon the half-starved creatures, and held them in detes-

tation, as did the Puritans the wrecks of humanity that occupied the soil of Massachusetts.

The Europeans of Otondo's time, who attempted, in 1683, to open a settlement on the Peninsula, were astonished at a condition of savagery lower than they had ever heard of, and their disgust and horror with the land and its people were so great that they abandoned their intention of remaining in the country.

Powerless from the awful conditions under which they were compelled to support existence, knowing nothing of cultivation of any kind, doomed to imprisonment in a land carrying an anathema of sterility and where large game had become extinct, the tribes of Lower California, among all the barbarous and savage people of America, "trod the wine press of the fury of the wrath of God, the Almighty."

The greater part of the peninsula at the time of the coming of the fathers, was in possession of the Cochimis, the Gualcuris and the Pericuis, who occupied the southern part and some of the adjacent lands.

They were a long haired, wild-looking people, scorched into negro blackness, naked and not ashamed. Morals, in the technical sense, they had none, they could not be charged with sin, for they had no knowledge of the law, and therefore they could commit no breach of the law. They bored holes in the ears, lips and nose, inserting in the openings bones, shells or sticks. They bore only names of common gender, which they received while yet in the womb. Without fixed abodes they roamed the country in search of food, supporting life on snakes, roasted grasshoppers and ants, on wild fruit and roots dug from the cacti beds, and because of this rooting habit they were called by the Spaniards "Cavadores"—the Dig-

gers. Here is what Father Ugarte writes of the things on which they sustained life: "They live on rats, mice and worms, lizards and snakes, bats, grasshoppers and crickets; a kind of harmless green caterpillar, about a finger long, on roots and barks and an abominable white worm, the length and thickness of one's thumb." Father Clavigero adds they never washed themselves, and that in their filthiness they surpassed the brutes. Their hair was crawling with vermin, and their stupidity was so dense that they could not count beyond five, and this number they expressed by one hand. The different tribes, Father Basgert tells us, represented by no means rational beings, but resembled far more herds of wild swine, which run about according to their own liking, being together to-day and scattered to-morrow, till they meet again by accident at some future time. They had no marriage ceremony, nor any word in their language to express marriage. Like birds and beasts they paired off according to fancy. They practiced polygamy, each man taking as many wives as would attach themselves to him, they were his slaves and supported him. Their forebears had exterminated or driven into the inaccessible mountain canyons the larger game of the peninsula, the deer, the antelope, the big-horn, the ibex. They tracked the flight of buzzards, with greedy eyes, and followed to share with them the putrefying carcasses of animals dead from disease or killed by pumas or mountain lions.

When, by good luck, they captured a hare or a jack-rabbit, they attached a small morsel of the raw and bleeding flesh to a fiber cord and, after swallowing it, drew it out after a few minutes, and passed the partially digested mass to another, who repeated the foul act. Yet they were not cannibals, and in abstaining from human

flesh offered a striking contrast to the Aztecs of Mexico City, who, fed on human flesh, cut and salted the bodies of prisoners captured in battle and sold the meat at the public markets. They were a fierce and savage nation, without law, tribal rules or government of any kind, unruly and brutal in their passions, mercilessly cruel to their enemies, were more gregarious than social and of a cold blooded disposition often manifested in treachery, in relentless persecutions and in assassinations. Otondo's colonists charged them in addition with asinine stupidity, ingratitude, inconstancy and irredeemable laziness. The Jesuit fathers wrote more kindly of them, they condoned their bestiality and shameless licentiousenss by reason of their squalid surroundings and sordid conditions, but then we must remember that from the day the Jesuits opened their first mission among them, the "Digger Indians" became their spiritual children and wards of the church. This was the land and these the people to whom, in their unexampled abandonment and unspeakable degeneracy, the missionary priests of the Society of Jesus brought the message of salvation, the hope of happiness in this life and the assurance of a resurrection to a higher and better life beyond the grave.

Now it may be asked why I have dwelt at such length on this unpleasant subject, why I have pictured so gruesomely, even if truthfully, the disgusting habits of a foul and filthy people? I have done so that those who now read this work may learn and understand what manner of men they were who, for Christ's sake and for the sake of perishing souls, said "good-bye" forever to their friends at home, to all that men in this world value and prize, to the teeming vineyards of sunny Spain, to ease, comfort and the delights of companionship with re-

fined or scholarly minds, and doomed themselves voluntarily to the horrors of hourly association with revolting vice, with repellent surroundings, to daily fellowship with filthy and unhospitable hordes. The "Digger Indian" was a man, so was the priest. The Digger Indian had descended to the level, and in some instances below the level of the brute; the priest rose to the heights of a hero and to the plane of the saint. What conspiracy of accidents, what congeries of events, what causes combined to make a brute of one and a civilized and an honorable man of the other? Well, unrestrained passions, ungoverned will, unregulated desires, contempt for all law human and divine in the beginning and then entire ignorance of it, and finally well-nigh desperate conditions of existence and almost utter destitution and, therefore, impossible conditions of civilization, made the Digger Indian. And the Jesuit priest, the hero and the saint? Ethnologically, it is not so long ago since the ancestors of the priest were barbarians, and on the downward road to savagery. When Pope Innocent I., early in the fifth century, sent his missionaries to civilize and preach the doctrines of our Divine Lord to the Spaniards and those of the Iberian peninsula, they were, as we learn from the letter of the Pope to Decentius, given over to foulness and the worship of demons. The church lifted them out of their degradation, civilized and Christianized them and made of them what Voltaire termed "an heroic nation." The same church with her consecrated missionaries was leading out from the shadow of death the Digger Indians and would have made a civilized and Christian community of them if she had been left for fifty years in undisturbed possession of the field.

CHAPTER XII.

THE JESUITS AND THE DIGGER INDIANS.

The true idea of an effective religion, the idea which is formulated in the word Christian, is that it should not merely be fully capable of adaptation to the habits of all climates and natures, but that in each locality it is able to meet the wants of all conditions of human life and of all types of minds. Our divine Lord and Master taught the highest lessons of virtue and the most heroic and has exercised so deep an influence on human souls, that it may be truly said his active life of three and one-half years has done more to regenerate and humanize our race than all the disquisitions of philosophers and all the discourses and writings of moralists since the world began. Among the believers in the Divinity of Christ, and more especially in the church which he established to perpetuate his doctrine and sacraments, we naturally look to find men, who by their lives and conduct furnish us examples of the influence on their souls of the grace and teaching of the divine Master. But particularly do we expect from those whom Cicero called divine men and whom we honor with the exalted title of priests lessons of sublime abnegation, of purity of life, and, when the occasion demands it, of heroic sacrifice. To the credit of the Christian religion and for the honor of our race the centuries proclaim since the resurrection of our Lord the sanctity and heroism of vast numbers of these consecrated men who enobled their generations and died confessors and martyrs. Of these were the members of the missionary orders of the church and among them were many of the order established by Ignatius

Loyola for the conversion of the heathen and the savage.

The Jesuit fathers on the American missions showed to the world an example of missionary zeal, a sublime enthusiasm, a steadiness of perseverance, of suffering and of persecution heroically borne with a hope and resignation which, while memory lives, will encircle their name with a halo of glory. "No deeds," says Cicero, "are more laudable than those which are done without ostentation and far from the sight of men." Buried in the solitude of great wastes or amid the desolation of towering sierras, away from the temptations of vain glory, they become dead to the world and possessed their souls in unalterable peace. "Maligners may taunt the Jesuits if they will," writes Parkman, "with credulity, superstition and blind enthusiasm, but slander itself cannot accuse them of hypocrisy or ambition."

We have already learned something of the awful degradation of the tribes. Allow me to anticipate the serious nature of the struggle the missionaries were now engaged in by an extract from a sketch of the Sonora mission, written by one then laboring among the tribes. "The disposition of the Indians," writes the priest, "rests on four foundations, each one worse than the other, and they are ignorance, ingratitude, inconstancy and laziness. Their ignorance is appalling and causes them to act as children. Their ingratitude is such that whoever wishes to do them good, must arm himself with the firm resolution of looking to God for his reward, for should he expect gratitude from them he is sure to meet with disappointment. Their laziness and horror of all kind of work, is so great that neither exhortation, nor prayers, nor the threat of punishment are sufficient to

prevail upon them to procure the necessaries of life by tilling their own lands; their inconstancy and want of resolution is heart-breaking."

And now it may interest my readers to be informed of the methods and the discipline of reclamation followed by the missionary fathers when dealing with savages either in northern Canada or on the shores of the Pacific. Religious and moral teaching naturally underlaid their system. They attached supreme importance to oral teaching and explanations of the doctrines of the church, iterating, reiterating and repeating till they were satisfied their instructions had penetrated into the obtuse brains of their swarthy hearers, lodged there and were partially, at least, understood. In the beginning and to attract them to the divine offices and instructions they fed them after the services were over. They were dealing with "bearded children," as one of the fathers wrote and as there was only a child's brain in a man's body they were compelled to appeal to their imagination, their emotions and affections rather than to their intellects. Having in a measure won their good will they began to teach the children, singing, reading and writing. They composed catechisms in the native dialects, insisted on the children memorizing the chapters which the fathers with heroic patience explained and unfolded.

They now established a children's choir, introduced into the services lights, incense, processions, genuflexions, beautiful vestments, the use of banners and flowers for the purpose of decoration. They brought from Mexico, sacred paintings and the stations of the cross which they used not alone as incentives to devotion but as object lessons in religion. The rude and simple chapels

which they built with the help of their newly made converts were not only temples where the holy sacrifice was offered and prayers said, but they became consecrated kindergartens where the altar, the crucifix, the way of the cross and the painting of the Last Judgment taught their own lessons. By pictures, by music, by art and song, and symbolic representations, by patience and affection they developed the stupid minds and won over the callous hearts of these benighted children of the desert. The fathers in time choose from their converts assistants known as *Temastranes,* who taught catechism to the children, acted as sacristans and explained from time to time the rudiments of religion to the pagan Indians. They appointed for every congregation a choir master, known as the *maestro,* who could read and write, was comissioned to lead the singers, male and female, and teach others to play on musical instruments. In time they became enamored with their work and the progress they were making, so much so indeed that one of the fathers writes: "It is wonderful how these Indians, who can neither read nor write, learn and retain two, three or four different masses, psalms, chants of the office of the dead, chants for Holy Week, vespers for festivals, etc." Then when the fathers succeeded in gathering them into communities and the children, under their fostering care, had grown into young men and women, they taught them different mechanical trades and many of the Indians became tailors, carpenters, tillers of the soil, blacksmiths, butchers, stone cutters and masons. "I know," writes the author of the "Rudo Ensayo," "several Opates and Eudebes who can work at all these trades and who now play on musical instruments with no little skill." It has always taken centuries to graft

upon savagery anything approaching a high civilization, yet in thirty years these devout priests had changed these children of the desert and the mountain from eaters of raw meat, stone tool users and grinders of acorn meal in rock bowls to tillers of the soil, weavers of cloth, workers in metal, players on musical instruments and singers of sacred hymns.

The consecrated man who entered upon the territory of a savage tribe to make to the owners of the soil a proclamation of the will of Jesus Christ, knew from the history of the past that he might be murdered while delivering his message. His mission demanded from him unflinching courage, good health, a living consciousness that the eye of God was upon him; demanded, in fact, that he clothe himself in the garments of the hero and the martyr. We must remember that by nature the missionaries were men like others of our race; swayed by the same impulses; animated by human hopes; agitated by the same fears; subject to the same passions. But the practice of daily self-denial and self-sacrifice; the crucifixion of the flesh with all its earthly appetites and desires; indifference to worldly honors and worldly rewards, contempt for the vanities of society, a life of hourly intercourse with heaven, and a supreme purity of intention raised them in time unto the plane of the supernatural. Outside of the immediate companions of their order they were unknown, they coveted obscurity and were satisfied to be forgotten of men. "It is possible," writes Marcus Aurelius, "at once to be a divine man, yet a man unknown to all the world."

It is impossible to study their lives and not feel that they were men eminently holy and of tender conscience, men acting under the abiding sense of the presence and omniscience of God, living in his holy fear and walking

in his ways. "If ye labor only to please men, ye are fallen from your high estate," wrote Francis Xavier to the members of the order in Portugal.

Preaching the precepts of self-denial to men and women given over to sensual indulgence, to carnal pleasures, and with whom freedom to think and act as they pleased was an immemorial right, these men of God came as enemies making war on the dearest traditions of the family and the established customs and habits of the tribe.

From the cradle to the grave, this religion of the strangers forced on their savage natures a new law of conduct, new habits, new conceptions of action and of life. It entered above all into that sphere within which the individual will of the savage man had been till now supreme, the sphere of his own hearth; it curtailed his power over his wife and child; it forbade infanticide, the possession of more than one woman and commanded the abiding with that woman and with her alone. It challenged almost every social act; it denied to the brave cruelty to an enemy and the right to torture his foe; it made war on his very thoughts if they were foul. It held up gluttony and drunkenness, to which they were wedded and which alone made life worth living, as abominable vices; it interfered with the unlawful gratification of sexual desire and condemned killing for revenge or gain under threat of eternal fire. It claimed to control every circumstance of life and imposed abstinences and fasts on men, at all times, ravenous for food and drink.

When reading of the martyrdom of many of these heroic priests our wonder is, not that forty-seven of them were done to death when delivering the message of the Crucified Christ, but that any one of them escaped the horrors of the torch or the scalping knife.

CHAPTER XIII.

THE VACA DE LUMBRE.

The morning I left Santa Cruz for the historic town of Loretto I went to assist at mass in the only church in the village. It was as early as 6 o'clock and I was surprised and edified to see the number of Mexicans and Mexican half-bloods who were waiting for the service to begin. After mass, as I was passing and repassing, examining the windows and certain peculiarities of the architecture, I was struck with the singular appearance of a half-breed woman who was kneeling by one of the pillars, with a number of children also kneeling beside her; a group like which we see carved in marble on some of the ancient tombs of Europe. While I was studying from a respectful distance their features and facial expressions, the Mexican priest who had offered up the Holy Sacrifice came out from the sanctuary and in a subdued voice bade me good morning. After an interchange of courtesies I asked him,

"Why is this poor woman crouching there with her children?"

He answered, just as if it were an every day occurrence:

"Some poor woman, I suppose, who has something to ask of God."

Then observing and turning to me he said:

"She is the wife of a Mason who was hurt by a fall two or three days ago, the family is quite destitute and no doubt they have come to ask help of God." Without interrupting her devotions, I laid down by the base

of the pillar what was a trifle to me, but a god-send to her and her family; upon which, without thanking me except by a courteous inclination of the head, she went up to the high altar, followed by her children to return thanks to God. Now all this might be very ignorant religion to an American Protestant, but to me it was true religion, and, what was more, an example of sincere faith. She trusted that God would supply what she wanted, she knew that he had said about his house being the house of prayer and she came to that house in faith to ask him for help in her troubles; and when she got what she wanted she evidently believed that her prayer had been heard, and therefore did not thank me, whom she considered merely the instrument, but God who had sent me.

My companion and guide from the town of Jesus Maria was a quiet, honest representative of the Mexican half-breeds to be met with in almost every village of this peninsula.

"Tell me, Ignacio," I said to him in a solemn tone, late in the evening when we were coming out of an ugly ravine, "tell me of this *La Llorona* who haunts the mountain paths and the lonely roads leading to the towns; is she worse than the *Vaca de Lumbre,* the gleaming cow, that at midnight suddenly appears on the Plaza del Iglesia and after a moment's pause bounds forward, and with streams of fire and flame flowing from her eyes and nostrils, rushes like a blazing whirlwind through the village."

"Ah, senor, she is worse, indeed she is worse than the fiery cow, for it is known to everybody that while the vaca is terrible to look at, and on a dark night it is awful, she never does harm to any one. The little children,

too, are all in bed and asleep, when the Vaca de Lumbre appears, and it is only us grown people that see her and that not often. But the weeping woman indeed is harmful; it is well, senor, that we all know her when she appears, and we are so afraid of her that no one will say yes or no to her when she speaks, and it is well. Many queer things and many evil spirits, it is known to us all, are around at night and they are angry, when on dark nights there is thunder and rain and lightning, but the Wailing Woman is the worst of all of them. Sometimes, sir, she is out of her head and is running, her hair streaming after her and she is tossing her hands above her head and shrieking the names of her lost children Rita and Anita. But when you meet her some other time she looks like an honest woman, only different, for her dress is white and the *reboso* with which she covers her head is white, too. Indeed, anybody might speak back to her then and offer to help her to find her children, but whoever does speak to her drops dead. Yes, indeed, sir, only one man, Diego Boula, who years afterward died in his bed, was the only one who ever answered her and lived. Diego, you must know, was a loco, a fool, and he met her one night when he was crossing the Plazuela San Pablo. She asked him what he did with Rita and Anita. And he looked stupid at her and said he wanted something to eat, for he was always hungry, this Diego. Then she took a good look at him and then threw back her white reboso and Diego saw a wormy, grinning skull, and blue little balls of fire for eyes. Then she brought her skull near to his face and opened her fleshless jaws and blew into Diego's face a breath so icy cold that he dropped down like a dead man. But, senor, a fool's luck saved him and when he was found in the morning, he

was recovering. It is said that this ice cold breath of hers, freezes into death who ever feels it. Then after the person falls dead, she rushes onward again, shrieking for her lost ones, but the one who speaks to her is found the next morning dead, and on his face and in his wide open eyes there is a look of awful horror.

Did I ever meet her? God forbid, but I heard her shrieks and wailings and the patter of her feet, as she ran, on the cobblestones of the Calle de San Esteban."

As we drew near to the inland village where I intended to put up for the night the country bore all the appearance of having lately been swept by a tornado of wind and rain. A swirling mass of water must have rioted over the lowlands, for rocks, trees and bowlders lay everywhere in confusion and encumbered the roads. Many of the fruit trees were uprooted, houses unroofed and outbuildings dismantled. Sure enough when we entered the town it bore all the marks of cyclonic wrath. With difficulty we obtained accommodations for the night. When I strolled out early next morning to take a look at the town and the damage done by the storm, the entire population apparently, men, women and children were gathered around their church which had been blown down by the cyclone. Some were chipping stones, some carrying lime, some mixing mortar, some pulling down the shaken walls, some splitting shingles for the roof, some strengthening the sprung beams. Everybody was busy about the church and, seemingly, not one was engaged about any of the houses. A sudden shower drove me into a protected part of the building for shelter, and I got into conversation with a man who turned out to be the priest, but not being quite as good a bricklayer as he was a theologian, he was then serving as hodman to

his own clerk, or sexton, the mason of the village. Not knowing at the time that I was addressing the cura or parish priest, I asked him how all these people were paid.

"Paid?" said the reverend hodman, "why, they all belong to this parish."

"Yes," I replied, "but how are they paid?—I mean," continued I, hesitating and turning over in my mind what was Spanish for church rates or dues, "how do you raise the money to pay all these people their day's wages?"

The hodcarrier laughed. "Why," he spoke back, and I now from his face and accent began to suspect he was somebody, "why, you do not pay people for doing their own work. It is the house of God, their own church which they are repairing. It is mine, it's theirs, it is their children's. Until the church is ready we have no place to assemble to pray to God and publicly to offer up to him the holy sacrifice. There will be no work done by us till we have repaired God's temple, our own church." Who was it who wrote: "O, for the touch of a vanished hand, and the sound of the voice that is still." And O for the simple piety and child-like faith of the days of old. In the presence of this example of rugged faith and zeal for the house of God on the part of this priest and his flock I called back to my mind the ages of faith and the sublime heroism and devotion of the early Christians. Beyond a doubt the church was theirs. Not a day did these simple people go to their work till they had assisted at the mass offered up by the priest who was now, as a hodman, helping in the rebuilding of their temple. Not a time did any of them start out on a long journey without first receiving holy communion from the hands of this

man of God. Yes, and many a time, too, when sickness entered the home or when trouble came to some one of the family, might you see an anxious wife or trembling mother kneeling before the tabernacle, who had stolen away from the noise and distractions of home, and had come unto the altar of God to pray for herself and her loved ones. To these honest souls their church was as necessary as their sleeping rooms or their kitchens and was used as much. When it was blown down they felt the want of it as much as they did that of their own houses. The church was always open and they came and went when and as often as they liked. Surely it was their church and they made good use of it.

I remember well the day I came down from the Sieretta mountains and was passing on foot through the little city of Aguas Coloradas, the church of which was well worth seeing. I had my camera and field glasses hanging from my shoulders, some few samples in a canvas bag, was wearing a suit of rough khaki and was not altogether the figure for the inside of a church.

"What shall I do with these things?" I said to my guide.

"Put them down here on the church steps," said he.

Now these church steps projected into the market place, which at that time was full of all sorts of rough-looking people. I laughed and said, "I had much rather not put such a temptation in the way of Mexican honesty."

"Well," answered my guide, "there is no doubt that the people of Aguas Coloradas are the greatest rogues unhung" (he belonged himself to a neighboring parish, and like all members of little communities was narrow enough to be jealous of his neighbor's prosperity),

"your excellency is perfectly right, they are the greatest rogues unhung. But they are not so bad as to steal from God." I put my things on the steps and after the lapse of an hour I found them, and along with them some eight or ten baskets of fruit and vegetables, which the market people had left there while they went in to say their prayers, all of which though looking very tempting, though entirely unguarded, except by the unseen presence of God, were as safe as if they had been under lock and key. Is there a church in any city of America whose sanctity would protect day and night articles left exposed before its door? If not, why not?

WONDERFUL CRUCIFIX.

Very much to my surprise I discovered in the sacristy of the quaint little church of this primitive village a duplicate of Julian Garces' famous copy on glass of "The Dead Christ." Garces painting from the original hangs in the baptistry of an ancient church on the Calle San Pablo, Mexico City, and is never exhibited to visitors save on request. It is a wonderful painting on glass, thrilling in its awful realism and impossible, once seen, ever to be forgotten.

It was copied many years ago by the Dominican painter, Julian Garces, from the original painting on wood, carried to Spain, when the religious orders were suppressed by the Mexican government in 1829. This wonderful painting on wood is now preserved in the convent of the discalced Order of St. Francis, Bilboa, Spain. It is known as the crucifix of the devil, and intimately associated with it is a curious and touching legend.

Early in the seventeenth century Mexico City was the Paris of the Latin-American world. It possessed great

wealth, for the mines of Mexico were literally pouring out silver. Its reputation for gaiety, for the beauty and vivacity of its senoritas, for its variety of amusements and for the splendor of its climate, attracted to its hospitable clubs many of the rollicking and adventurous youth of Spain. Among them was a young man of noble birth, who at once flung himself into the whirlpool of dissipation that eddied in the flowing river of fashionable amusements. In a few years he wasted his patrimony in a fast life and in wild debauchery. Utterly ruined in pocket and in credit, he determined to end it all in suicide. He was returning from the Spanish casino, after losing heavily at a game of chance, when the thought of self-destruction possessed him. He was revolving in his mind the easiest way leading from earth—to where—"To hell!" he muttered. Then he entered upon another line of thought. He had read and heard of men in desperate circumstances asking and receiving help from the devil.

"I'll be damned anyhow," he argued with himself, "and I may as well have a few more years on earth before going down into the pit." Much to his surprise, when he entered his chambers he found them lighted up and a stranger awaiting him. The man who rose to greet him was in simple citizen's dress, and uncommonly like one of those curb brokers who are so numerous in our own day. "I understand, sir," said the stranger, "that you wish my services."

"Who are you?" asked the Spaniard.

"I am the party who, many hundreds of years ago, said to the founder of your religion: "All these will I give thee, if, falling down, thou wilt adore me."

"The Devil?"

"The same, at your service."

A bargain was quickly made. In exchange for his soul, by a document to be duly signed and delivered, the prodigal was to receive more money than was necessary to re-establish his fortune; and to enjoy until the dissolution of his natural body, all that he desired, all that earth could offer him; sensual delight, influence, a distinguished career in society, the intoxication of power, in short all that gold could purchase and secure. However, the Spanird was no fool, and before he attached his signature to the fatal contract, he wished to be satisfied that he was face to face with the Master of Hell, the Rebel Lucifer. "Before I sign this parchment, may I ask you a few questions?"

"Certainly," replied Satan.

"Well, since you are Lucifer, how long have you dealt with the children of Adam?"

"Since that day I laughed at God, when in the Garden of Eden, I seduced Eve."

"Then you must have met in the waning years of His mortal life Him whom men style Christ?"

"I followed Him about for three years, and for the defeats He inflicted on my friends and for the insults He offered to me I gave Him blow for blow."

"Were you present when He hung on the Cross of Calvary, between a murderer and a thief, and did you witness his awful agony and ignominious death?"

"I was, of all the crowd that mocked Him and laughed at Him when He hung on the wood, the most pleased witness. Why, I inspired the fools who nailed Him to the wood. It was I who tempted Judas, the Iscariot, to betray Him; I inspired the Hebrew priests to insult Him, another to spit upon Him, and my friend Pilate, who now occupies a conspicuous place in my kingdom, to scourge

Him, and fling Him to the mob. Why, only for me, the fools would not have whipped Him, pressed the crown on His head, put a reed in His hand for a scepter and a scarlet cloak on his bleeding shoulders and, amid laughter and insult, made a mock king of Him.

"You remember His features, the expression on His face when He hung on the cross and cried aloud to His Father: "My God, My God, hast Thou abandoned me?" questioned the Spaniard.

"As if His vile death happened yesterday.

"Could you and will you paint for me the face, and the expression on the face as you saw them immediately before He said: 'All is consummated,' and when darkness was falling on Calvary and Jerusalem?"

"I can and will."

"Well, then, do I beseech you, before I sign our compact. Here is the brush and here the palette."

Lucifer took the brush and paints, and when in a few moments he handed them back the face of Jesus Christ stood out upon an ebony background. It was a face full of tenderness, of infinite pathos, of unspeakable pity, of boundless compassion; but on it, deeply graven in the flesh, were lines of awful suffering, the seamings of sorrow and sustained agony. The Spaniard, as he gazed upon the "Santo Rostro," the Divine Face, trembled as trembles the man to whom the dead speaks. The eyes of the Holy Face looked into his own; he was standing before a Christ that was not yet dead, but whose body lay limp, and from which the blood was pouring from a gash in the side and trickling from wounds in the head and hands. From out the closing lids, the eyes, glazed with approaching death, looked down upon him in sorrow and infinite pity. The face and figure were so heart-rending

in their terrible realism, the look of the agonized Crucified so appealing and so full of love that tears of sympathy welled from the eyes of the libertine. Then before, and hiding the face of the Christ, he saw the face of his mother, and the eyes that looked their last upon him when she lay upon her bed of death in their home in Madrid. Rushing past his tempter, the young Castilian flung himself at the feet of the Christ and cried aloud: "Jesus, son of David, have mercy on me." When, sobbing and broken-hearted, he rose erect he was alone with the dead Christ and the unsigned compact.

JULIAN GARCES' COPY.

In Garces' painting on glass, the dying Christ stands out in full relief with no perspective. Behind the cross all is darkness save alone a thread of lightning, snake-like and forked. Over Calvary the sky is lurid and of a dull red, whose fiery hue in portentous, lugubrious and awe-inspiring. The body of the dying Savior, the little board above the cross, with its prophetic inscription: "Jesus of Nazareth, King of the Jews;" and parts of the cross which the Divine Body did not cover, alone occupy space. Beyond and around them nothing, only the blackness of ebon darkness. Save the ribbon of snake-like lightning coming out of and piercing the impenetrable darkness, there is nothing; not a ray of light anywhere, no mark of a horizon, naught but the body of the Man-God, the gibbet and—night, moonless and starless. But the isolation of the Figure on the lone Cross, the pitiable solitude encompassing the Crucified, the blood oozing from the frayed wound and trickling down the pallid flesh, and the Divine Face from which expression, animation and life itself are lingeringly departing, appeal to

the heart and the imagination, and we are overwhelmed with pity and sympathy.

If we are familiar with the Holy Scriptures we hear the pathetic cry of Isais: "There is no beauty in Him now, nor comeliness * * despised, * * * a man of sorrows. * * * His look was as it were hidden from us.

"He was led as a sheep to the slaughter and He did not open His mouth."

"I have given my body to the scourgers, and my cheeks to the strikers; I have not turned away my face from them that rebuked me, and spat upon me." We call up the prophetic words of the inspired writer of the Psalms.

"I am poured out like water: they have dug my hands and feet."

"They gave me gall for my food, and in my thirst they gave me vinegar to drink: My God, My God, hast thou forsaken me?" We listen to Jeremias speaking with the voice of the Victim of Divine Love sacrificed before our very eyes: "My tabernacle is laid waste, all my cords are broken; my children have abandoned me, and they are not: there is none to stretch forth my tent any more: I am left alone."

While we stand with eyes fastened on the solitary and bleeding Figure, we see Him die. He is dead! From His hands, from His head fallen away from the dead muscles and resting on the naked breast, from the gaping wound made by the soldier's lance, the blood no longer flows. The body is bloodless, but between the muscles, through the delicate and transparent skin, one may count the bones of the Crucified, one might number the pulsations of the heart before it ceased to beat.

CHAPTER XIV.

THE PRADERA AND GUANO BEDS.

From my first chapter on Lower California I may have left the impression on the minds of my readers that the entire peninsula is a waste of desolation or that an anathema of sterility had withered the whole country. This would not be the truth. As we near the southwestern coast the land struggles to shed more vegetation and we begin to experience a mild, soft and almost langurous air. The palo verde, the mesquite, the giant sahuaros and many varieties of the cacti gradually appear. Along the eastern coast the land is yet more covered with mesquite trees, and malma and bunch grass above which looms the columnar pithahaya. The mesas or table lands of sand have here and there groo and gramma grasses. Then, as we climb the mountains we meet scrub oak and hill juniper, till at an elevation of 6,000 feet we enter the pine lands. Owing to the peculiarity of the river beds which run through loose quarternary deposits the water which flows down the mountains during the rainy seasons disappears in the porous earth, seeks underground channels, and after following its subterranean course for many miles, is lost entirely or comes again to the surface where the older formation rises or is crossed by a dyke forming a natural dam.

By reason of the clearness of the atmosphere and the absence of all foreign substances in the air distances are deceptive and appearances delusive. Small objects, such as the outlines of an isolated mound, the face of a projecting rock or a browsing steer loom large and stand

out sharp and well defined. At a distance of fifteen miles foothills seem but one or two miles off. From the top of Para hill, fifty miles inland, I have seen the panorama of the shores and bay, the town of La Paz, the hills and valleys, all clearly outlined. The escarpment of the San Juan mountains, 100 mies to the north of the hill on which I was standing, seemed but twenty miles away, and from the highest peak of the Cerita range, on a fine, clear day, they tell me, a circular panorama 350 miles in diameter, inclosing the most varied scenes of towering mountains, sunken deserts of yellow, shifting sands, patches of cultivated land and rolling ocean, is plainly visible. This diaphanous condition of the atmosphere is so deceptive that a stranger will sometimes begin a walk for a neighboring hill, thinking it only a few miles off, when in reality it is twenty miles away.

In certain stretches of this wonderful land currents of air of widely different temperature, and hydrometric layers of atmosphere lying one over the other produce an electric condition like what we are told occurs on the high Peruvian Andes. Owing to extreme dryness the ground is a very poor conductor, so that the superabundance of electricity in the air corrodes metallic implements or objects exposed and left upon the ground for any length of time. At times when desert storms sweep across the face of the land the air is so abundantly charged with electricity that the hair of the head will stand out like that of a boy on an insulating stool. The hair on horses' tails and manes become like the bristles on a brush, but seemingly no annoying effects follow. There are regions of this extraordinary land where rheumatism is unknown. Leather articles, books and goods which mildew in other coast lands, may here remain ex-

posed night and day without injury, showing the harmless character of the climate, in striking contrast with that of the Madeira and Canary Island where leather molds, salts deliquice, unprotected metal rusts, botanical specimens spoil and musical instruments cannot be kept in tune. Mulberry trees in Italy and Southern France require constant care and vigilance, but here, once planted, they demand no further attention. There are here stretches of land where in the dry, hot and rarified air meats, eggs, fish and fowl remain untainted for days.

Back of the ancient and historic town of Loretto—with which I will deal in another place—there is a valley of contradiction, full of fascination to the eye to-day, and to-morrow a land of desolation and of horror. It is called "La Pradera Honda," the deep meadow, from its marvelous wealth and coloring of vegetation at certain seasons and times.

The Pradera reposes between two menacing ranges of barren mountains which yet retain the ancient marks left by the waters when the desert was an inland lake. When I saw "La Pradera" a few days ago it was under a shroud of sand, and of ashes that the angry volcanoes of the mountains had, long ago, vomited upon it.

Turning to my Mexican companion and extending my hand toward the Prada, I asked: "Is there any life there?" "Si, senor," he answered, "there is life there, but it is life that is death to you and me. You see these intermittent and miniature forests of bisnoga and cienga cacti? They shade and protect from the fierce rays of a burning sun the deadly rattlesnake, the horned snake that strikes to kill, the kangaroo rat, the tarantula, the

chawalla, the white scorpion, the arena centipede, lizards and poisonous spiders."

The sun beat down upon the deadly silence, upon the dull gray floor of the desert where the bunched blades of the yucca bristled stiff in the hot, sandy waste. But before coming here I had heard of another and more wonderful life than the reptile existence dwelt upon by my friend. There are times when torrential storms of rain rage fiercely among the mountains bordering this arid land or a drifting cloud loaded with water strikes a towering peak. When these things happen, rivers of water flow madly down the furrows worn in the face of the great hills, and, hitting the desert, separate into sheets of liquid refreshment which give life and beauty to desolation and aridity. They come, says the inspired writer, by the command of God, "to satisfy the desolate and waste ground and to cause the seed in the parched earth to spring forth." Then the ashen white waste is all aglow with myriad blossoms, and the desert sands are covered with a most beautiful carpet of wonderful flowers for many of which the science of botany has no name.

Of all these plants that bloom in this vale of Hinom, perhaps, the most pleasing to the eye are the flowers of the cacti, and the rapidity with which their dry and apparently dead stalks throw out beautiful blossoms after their roots are watered, is one of the marvels of the desert. The cacti of La Pradera are an annual manifestation of the realism of death and resurrection and, as the plants come into fullest bloom in early spring, this desert at the time of Easter is one vast circular meadow where the rarest and most beautiful flowers have risen from their graves as if to glorify the resurrection of their

Lord and Master. The largest and most wonderful flower of them all grows, I am told, on an ugly, short, misshapen cactus which, for eleven months of the year is to all outward seeming, dead, but when its roots are watered, blooms with supremely delicate and waxy petals. There is another cactus, a low creeping plant of round trunk and pointed stem, repellent as a snake, and ugly to look upon which, at about the time of the vernal equinox, is covered wth large pink flowers, beautiful as orchids and fragrant as the fairest rose in my lady's garden. Then by the sides, and between the Mexican agaves and the white plumed yuccas with trembling serriated leaves, are scattered in luxuriant prodigality columbines, phloxes, verbenas and as many as twenty or thirty varieties of flowering plants for which my limited knowledge of botany supplies no names. Unfortunately, for the present, the names of many of these rare species are not known even to our professional botanists, and the common varieties of those which are classified, and found in other parts of California bear no such fascinating and gorgeous array of flowers as those indigenous to the "Pradera" desert.

The Islands of St. George off the east coast of the Peninsula of California are a singular group of squeezed or lifted rocks on which the dew never settles and where rain never falls for years. These are the famous "rookery islands" where, for uncounted years, enormous numbers of birds of the sea and of the land have built their nests, deposited their eggs and hatched their young. By some mysterious law of instinct and selection the birds, from the beginning, alloted small islands and sections on the larger islands to the different species of the feathered race, so that the sea birds, like the frigate pelicans,

the gulls, petrels and the like have their own allotments and the land birds theirs, and between them there is no friction or intrusion on each others' premises. With the first sign of dawn they begin the flight for their feeding grounds, and for hours the heavens are intermittently obscured by the countless members of this aerial host. They fly in battalions, or in orderly detachments, reach the feeding grounds on land or water fifty or a hundred miles away and at once scatter and separate in search of food. An hour before twilight, and timing their distance, they rise again, converge to an aerial center and wing for home. As the birds approach the rookeries they announce their coming by cries, calls or shrieks and are answered by those on the nests or by the young but lately hatched. The cry of the birds is heard far out at sea, and to the ship that sees no land, the effect is weird and ghastly, if not ghostly. The decomposing bodies of dead birds, of feathers, bones, flesh and entrails, the disintegration of shells and the droppings from millions of birds for thousands of years have superimposed upon the primitive surface of the islands a deposit of great commercial value, and in places eighty feet deep. This deposit, saturated with ammonia and phosphorus, is called guano and, wherever found, is dug out, chiefly by Chinese coolies, loaded on ships and freighted to the sea ports of Europe, where it is bagged or barreled and sold to gardeners and farmers for fertilizing their lands. On islands like Rotunda off Antigua, where the rock is porous and friable, and on which rain occasionally falls, the guano liquefies, percolates through the porous stone and decomposes the rocks into what is known as mineral phosphates.

CHAPTER XV.

ORIGIN OF THE PIOUS FUND.

Felicien Pascal, the French publicist, devotes an article in Le Monde Modern, to an explanation of the missionary success of the Society of Jesus, the members of which are known to us as Jesuits. It is rather exceptional for a French freethinker to write calmly and dispassionately of a religious association whose creed and manner of life are in direct antithesis to his own. Much has been written at various periods in their history of the "secrets" of the Jesuits; but, asserts Mr. Pascal, "the great secret of their strength is their sublime discipline. To this discipline the Jesuits have always owed their marvelous power and their acceptabilty as a chosen body of highly trained specialists among the ruling classes of Europe and in the savage wilds of Africa and America."

Mr. Pascal is experimenting with a social and historical fact and is disposed to deal honestly and dispassionately with its origin. Having no faith in the supernatural, it was not to be expected that the French sociologist would look beyond the human and the natural for the solution of a great problem. Unquestionably he is right as far as he goes or his negations will permit him to go. St. Paul, the prototype of all missionaries, writing to the Corinthians, recounts for their edification his own sufferings and sorrows, his "perils in the wilderness, in labor and painfulness, in watchings often, in hunger and thirst, in many fastings, in cold and nakedness." Further on, this extraordinary man, "called to

be an apostle out of due time," tells us why, according to men of the world, he was a fool. "I take pleasure in my infirmities, in reproaches, in necessities, in persecution, in distresses—for Christ's sake." On another occasion when writing to the Christians at Rome, he says that to men of the type of Mr. Pascal, the heroism of martyrs, confessors and missionaries, is foolishness; that it is impossible for the natural or worldly man to understand the things that are of the kingdom of God.

And now, let me record for the edification of my readers, the deeds of fraternal love and self-denial wrought among the savage tribes of this unhospitable land centuries ago by men whose heroism and success, Mr. Pascal and men like him try to explain by human discipline and human organization. In an earlier chapter I dwelt passingly on the attempt of the Spaniard Otondo to establish a settlement on the shores of the Bay of La Paz. For eighteen months the Spanish colonists tilled and coaxed a sandy soil and they reaped cactus, sage brush and disappointment. During these eighteen months not one drop of rain fell upon the soil, now dry and parched as the tongue of Dives. Otondo, in disgust, broke up the settlement, called off his men and sailed away for Manzanillo.

With Otondo's colonists, when they left Chalca, Sinoloa, went three Jesuit priests, one as cartographist to the expedition, and the two others as missionaries to the natives. They now pleaded to be permitted to remain with the tribes, for already they were mastering the language and dialects and had under instruction nearly four hundred adults and children. Father Copart had already begun the composition of a "doctrina" or short catechism in the native dialects. He experienced

much trouble, he tells us in a letter written to a clerical friend, in finding words and idioms to explain the doctrines of Christianity, but with the help of the children he got on fairly well. The fathers asked to be left with the tribes, but Otondo declared that he could not take upon himself the responsibility of leaving a solitary European on the accursed shore and insisted on the priests returning to Mexico with him.

Thus ended the first attempt to found a settlement in Lower California. What a singular fatality followed in the wakes of nearly all the first settlements on the coasts of North America. Raleigh's plantation in Virginia was abandoned after four years of disappointment and heart-breakings, though Grenville, the partner of Raleigh, said the land was "the goodliest soil under the cope of heaven." The first settlement in New England was even shorter lived and Goswald and Popham brought back their colonists from Maine, as did Otondo from California. The story of the hardships and sufferings from cold and scurvy of the first French settlers on the St. Charles is paralleled by the history of Vizcaino's voyage and landing in the Bay of Monterey.

Twenty years after Otondo's failure England called off its first contingent of settlers from Tangiers. La Salle, the explorer, and one of the grandest men that ever trod the American continent, was shot by his own men and his dream of colonization ended. The pioneer Scotch colony at Darien failed absolutely, as did Selkirk's settlement in the Canadian Northwest one hundred years ago.

The colonization of Lower California, such as it was and is, was finally effected mainly through the persistent efforts and untiring zeal of two Jesuit priests, Eusebio Kino and Gian-Maria Salvatierra. Some day the lives

of these heroic and saintly men will be written and will give added dignity and importance to the history of Christian missions on the continent of America.

Once having begun the conversion of a savage or barbarous people, the Jesuit missionaries never voluntarily retire from the field. It was at no time, and is not now, a part of the policy of the constitution of the order to despair of converting a people who spurned their friendly advances or with bloody hands welcomed them to hospitable graves. The Society of Jesus is not, by any means, *the greatest* missionary body to which the Catholic church has given birth. Any one familiar with Montalambert's great history, "The Monks of the West," must concede that the church has been the fruitful mother of heroic and zealous missionary orders. Considering the duration of its existence, it must, however, be admitted that the Society of Jesus is on a plane of successful equality with any organization established since apostolic times for the conversion and civilization of pagan nations and savage tribes. It is a hopeful augury for the establishment and permanency of a more friendly feeling among us all that, since Parkman gave us his "Jesuits in North America," the hostility to the great order among English speaking races is, like an unpleasant odor, gradually evaporating.

After reading Otondo's "Report" of the failure of the California colony, the horrible degradation of the tribes and the pitiful sterility of the land, the Spanish viceroy to Mexico advised the home government to have nothing more to do with the accursed country. The King of Spain followed the recommendation of his representative, and Lower California was abandoned to its sagebrush, scorpions, tarantulas and naked savages.

Despairing of obtaining any help or even encouragement from the Spanish or Mexican officials, Father Salvatierra now appealed to the zeal and Christian charity of the Spainards in Mexico to assist him in his effort to reopen the mission to the Digger Indians. Father Eusibio Kino, who was with the Otondo expedition, and Father Juan Ugarte flung themselves into the good work and with speech and pen pleaded for the California tribes. It was impossible to resist the call of these men; the piety of their daily lives, the sincerity of their motives, their scholarship, eloquence and heroism awoke enthusiasm and touched generous, though until now, indifferent hearts. Subscriptions began to move. From far away Queretaro, Padre Cabellero, a priest who inherited parental wealth, sent $10,000. The "Congregation of Our Lady of Sorrows," a confraternity of holy women, promised a yearly sum of $500; Count de Miravalles subscribed $1,000; Pedro Sierrepe of Acapulco gave the fathers a lancha or long boat and offered the loan of his ship for a transport, and from Mexico City and towns in the vice royal provinces came liberal contributions.

These generous donations Father Salvatierra formed into a fund, or, as we would say to-day, capitalized for the evangelization of the California Indians and the support of the California missions. Thus began the famous "Fondo Piadoso de California," of which we have heard so much and which involved in its distribution and partial settlement two religious orders and three civilized nations, and for which, to quiet a claim against it, the government of the United States lately paid the archbishop of San Francisco three hundred and eighty-five thousand dollars.

On the 13th of July, 1697, the ship of Pedro Sierrepe

loaded with supplies for the infant mission sailed out of the harbor of Acapulco, on the Pacific coast, and passing through the straits of Magellan, finally, after two months of ocean travel, rounded Cape San Lucas and anchored in the Yaqui bay, Gulf of Cortes, now the Gulf of California. Father Salvatierra, who had come overland to Sonora, was, with the illustrious Kino, giving a mission to the Yaquis when he was informed of the arrival of the ship. Kino made preparations to accompany him to Lower California when the Governor of Sonora intervened.

The provinces of Sinoloa and Sonora were at this particular time threatened with an Indian uprising, the governor refused to let Kino leave him, contending that the influence of the priest in controlling the restless Yaquis and Mayos was greater than the presence of a thousand soldiers. So Salvatierra sailed alone out of the Yaqui bay and in October landed in Lower California, twenty miles north of the site chosen by Otondo for his unfortunate colony. Like that heroic Canadian missionary, Breboeuf, Salvatierra, when he landed, knelt upon the beach and placing the country under the protection of the Blessed Virgin, invoked the help of God in the work he was about to undertake. Then rising he exclaimed aloud, "*hic requiescam, quoniam elegi eam*"—I will remain here, for I myself have chosen it. After the landing of the baggage, the provisions and a few domestic animals the party rested for the night.

Here is the roster of the first settlement and practically the first Christian mission which led to the civilization of the tribes and the exploration of all California. A Portuguese pick and shovel man called Lorenzo, three Christianized Mexican Indians, a Peruvian mulatto, a

Mexican half-caste from Guadalajara, one Sicilian and one Maltese, sailors who had served in a Philippine galleon and one Jesuit priest, Father Salvatierra. In the history of early colonization, in any part of the world, there is no page recording anything like this or any enterprise composed of such seemingly hopeless material. And yet under the masterful mind of the missionary, with faith, piety and tact these human fragments were welded into a compact body that conquered a stubborn soil and conciliated tribal opposition.

The Maltees sailor was also an ex-gunner and to him fell the honor of mounting the miserable little cannon brought from Acapulco to protect the mission if attacked by the natives. The Mexican Indians, under the eye of Lorenzo, were to till a few acres of ground, look after the few cattle, sheep and goats brought in the ship, and in a pinch, do some fighting. After throwing up a temporary chapel and staking off the ground, they began the building of a rough stone wall around the camp and mission to guard men and animals against the hostility or covetousness of the savages. The Indians gathered from near and far, and looked on stolidly, making no demonstrations of friendship or dislike.

I already mentioned that Father Copart of Otondo's expedition had partially compiled a catechism of the Cochimis or "Digger Indian" language. Salvatierra from this unfinished abridgement gained some knowledge of the savage tongue. He began, as did the Jesuits with the Wyandottes, by appealing to their affections through their wretched and always half-starved stomachs. After filling them wth cornmeal porridge, he addressed them in Copart's gutterals, tried to teach them a few Spanish words, and after three months baptized his first convert

—a cancer victim—to whom Father Copart had given some instruction eleven years before. To the infant village and mission he gave the name of Loretto the same name which Father Chaumonont had bestowed on the little bourg outside of Quebec, where he sheltered, and where yet dwell the last of the Hurons.

CHAPTER XVI.

THE REPOSE OF THE GRAVE.

I well remember the afternoon I arrived—after a ride across the mountains of thirty-two miles—at a turn of the narrow road and, for the first time, looked down upon the quaint and historically fascinating village of Loretto, Lower California.

> This is the place. Stand still, my steed,
> Let me review the scene,
> And summon from the shadowy past
> The forms that once had been.

Eight generations of human life had come into the world, lived their uneventful but singular existence, and when the time came were laid away with those who had preceded them, since first the Spanish missionary bore a message from the crucified Christ to the most loathsome of men and women that ever walked the earth. Yet they could claim, if they but knew it, kinship with God, the immutable and eternal, through Him whose message of friendship and love the Spanish Ambassador was sent to deliver.

Unless God the Almighty took away their human and gave them a brute nature, it was impossible for the "Digger Indians" or for any human beings to approach nearer to the brute's state.

There existenec was a hell of foul licentiousness, of nameless lusts, of hunger, thirst, of disease and physical suffering, and there was no hope for betterment save in annihilation or reconstruction, or rather resurrection. The civilized and educated man who entered this barren

desolation of savagery, and devoted his life and his talents to the taming and uplifting of these brutalized men and women was a fool or a saint. This Father Salvatierra, who first came to live and companion with them, was a Jesuit priest, and though terrible things have been said and written about the Jesuits, their bitterest enemies never pilloried them as fools.

"When we have delivered our attacks and exhausted our ammunition on the Jesuits," writes de Marcillac, "we must, as honorable foes, acknowledge they are, as a body, the greatest scholars and most fearless missionaries known to the world."

When I entered this curious little Indian and Mexican village, Loretto, I carried with me a sense of reverence for the place and of respect for the memory of the consecrated men whose sublime heroism still lives in the tradition of the simple people. The following morning, after assisting at the sacrifice of the mass offered up by a very dark, half-Indian priest, I entered the unpretentious but well and cleanly kept graveyard to the rear of the church. All over the great Republic of Mexico, in Chiapas, Yucatan, Tabasco, in the states of Central America, wherever I went, I saw many things which I thought could be improved, but I must confess that their churches were always clean and their graveyards and cemeteries well looked after. The Spaniards, like the Jesuits, have been given hard knocks, but they were never charged with being an unclean people. The Latin Americans have inherited cleanliness from the Spaniards.

To me, who was fairly familiar with the humble but heroic history of Loretto, with the unspeakable degradation of the early tribes and the miracles of rehabilitation

wrought among them by the Jesuit and Franciscan fathers, this consecrated plot of ground was full of consoling memories. Here and there a monument of Todos Santos marble lifted itself above a forest of unpretentious crosses marking the graves of half-castes and Indians. These humble black crosses, with a ribbon of white paint bordering the black, bore unpronounceable names, the age and the day of the death of the deceased in Spanish. Some very few monuments had more elaborate inscriptions, but all, marble and wood, carried the Catholic and early Christian "Requiescat in pace"—May he or she rest in peace.

Dominating all in magnitude and impressiveness was the great central cross of cedar, the crux sanctorum, indicating that the enclosed ground was consecrated and exclusively reserved for the bodies of those who died in union with the Catholic church and sleep the sleep of peace. The transverse bar bore this inscription from the Book of Ecclesiastes:

"Corpora sanctorum in pace sepulta sunt: et nomina
Eorum vivent in generationem et generationem."

(The bodies of the just are buried in peace and their names live from generation to generation.) Further down on the cross was a verse from the Psalms:

"Qui seminant in lacrimis in gaudio metent."

(Those who sow in tears will reap in joy.)

A few months before my visit to Loretto, the young daughter of the harbor-master—a very charming and beautiful girl of seventeen—was drowned in the bay. Her body was recovered almost immediately, but for a time it was feared her mother would lose her mind. The affection and sorrow of her family are materialized in one of the most chaste and purest shafts of marble I have

anywhere looked upon. It is the only monument I have ever seen in a Catholic, or indeed in any graveyard, carrying a Christian and Pagan inscription. The brother of the young girl is a free-thinker, who worshiped his sister with the respect and affection of a brother and the passion of a lover. He entreated his father to have chiseled on his sister's monument, under the "Requiescat in pace," Ximinsez' epitaph on the tomb of Inez. Translated it would read:

Warm southern sun,
  Shine kindly here;
Warm southern wind,
  Blow gently here;

Green sod above,
  Lie light, lie light,
Good-night, dear heart,
  Good-night, good-night."

I referred in another place to M. Pascal Felicien's explanation of the missionary success of the Jesuits. If, like M. Felicien, they had no hope of immortality or expectation of a judgment to come, men of the heroic self-denial of Salvatiera and the other evangelizers of the "Digger Indians" would be to us sublime examples of folly, if not of insanity, developed by religious fanaticism. But, perverted ingenuity itself has never brought a charge of religious imbecility against the members of the great Order, and Eugene Sue but popularized the expression of Carrier de Nantes when he wrote: "The sons of Loyla are too wise for superstition and too deliberate for fanaticism."

When, last September, I was on my way to Guamas to sail for La Paz, I laid over at Los Angeles expressly

to call on Charles F. Lummis, the editor of "Out West," and the author of the "Spanish Pioneers." With the possible exception of Rudolfe Bandelier, Mr. Lummis is the best informed and most reliable living authority on the tribes of the southwest and the early missions of California. In answer to my request for his opinion on the manhood and sincerity of the priests who fought the wilderness and evangelized the tribes of the Pacific coast, Mr. Lummis took from a shelf his "Spanish Pioneers," and, placing his finger on a passage, asked me to read it, and this is what I read: "Their zeal and their heroism were infinite. No desert was too frightful for them, no danger too appalling. Alone, unarmed, they traversed the most forbidding lands, braved the most deadly savages, and left on the minds of the Indians such a proud monument as mailed explorers and conquering armies never made."

Before the "break up" of the Lower California missions, caused by political jealousies, disease among the tribes and civil wars, the Catholic church had established sixteen missions or parishes for the Indians, extending from Tia Juana at the north, to Cape Palmas of the south. Notice that I mention disease as contributory to the reduction of the missions. The passage of a primitive people from savagery to civilization, is like in its effects on human systems, to the influence of an entirely new and unaccustomed climate and is generally followed by a decrease in numbers during a transition period of more or less duration.

What this transition costs we may estimate by analogy from lower organic kingdoms. For instance, spring wheat has been changed into winter wheat, but the experiment entailed a loss of nearly three harvests.

Wheat has been forced to accommodate itself to the soil and climate of Sierra Leone, but only after an enormous loss and years of effort. Cochin China hens were introduced into the state of Colombia, South America, and it was twenty years before they were acclimatized. So that practically twenty generations perished before the few which survived chickenhood could adapt themselves to conditions and increase in numbers. Something analogous happens when members of the human family try to conform to altered conditions or enter upon a period of transition. It may end in complete disappearance as in the case of the Tasmanians and Maoris, or be followed by a revival in vitality under new conditions as among the Mexicans and Filipinos. When the missionary priests entered California they met a decomposing race, whose excesses and prolonged physical suffering from exposure and frequent starvation had reduced them to degeneracy. Their extinction in their wild and brutalized state was sure to occur in, ethnologically, a very short time. No doubt the restraints of civilization and the new conditions to which they were asked to conform hastened the inevitable.

There is left to-day out of a population computed in 1698 to be six thousand, a scattered remnant of, perhaps, fifteen hundred. Before the expulsionof the fathers and the consequent abandonment of the missions, almost the entire peninsula was redeemed and its population Christianized and civilized. To-day the unorganized remnant roam the hills of Khada-Khama retaining a few Christian practices wrapt up in the rags of pagan superstition. When they disappear forever, there will be no Cooper to perpetuate their memory, or write a romance on "The Last of the Digger Indians."

CHAPTER XVII.

SOLDIERS OF THE NEW TESTAMENT.

It may have occurred to a few of my readers who have accompanied me in my wanderings in Northern Mexico and Lower California that I have exhibited a rather strong partiality in favor of the Jesuit missionaries and by my silence have been unfair to those self-sacrificing and zealous members of the Order of St. Francis whose undaunted courage on the mission fields of the southwest have wrung applause even from the materialist and the infidel. I am filled with admiration for the zeal, the self-denial, the heroism of the martyrs and missionary fathers of the Franciscan order. From their monasteries came men whose names are beads of gold worthy to be filed on the Rosary of Fame; men of saintly lives and of a transcendent greatness that raises them high above the level even of good men and whose sacrifices for Christ and humanity challenge the admiration of the brave and stagger faith itself.

If I have omitted to do honor to the members of the great order it was because I have already been anticipated by many pens abler than mine. Bancroft, C. F. Lummis, Stoddard, Helen Hunt Jackson, Bryan Clinch and even poor Bret Harte, in fact, an army of writers in books, magazines and newspapers have sounded the praises of the Franciscan padres, forgetting those saintly men, the Jesuits, who preceded the Franciscans on the thorny road and broke the trail that afterward carried them to the martyr's grave

in the lonely desert. The world, and America in particular, will never repay or be able to repay its debt to the sons of St. Francis. Indeed, I doubt if Columbus could have sailed out of the harbor of Palos on his providential mission of discovery had he not enlisted the co-operation and influence of Francis of Calabria, confessor to Isabella, the queen of Spain, and a member of the Franciscan order.

It was this Spanish Franciscan who appealed to the queen to outfit the great Genoese for his daring experiment. Then the first and most influential protector in Spain of the great Admiral was that noble and generous Franciscan, Perez de Marchena. Returning from his first wondrous voyage of discovery, Columbus obtained from Pope Alexander VI. the privilege of selecting missionaries to accompany him on his second voyage to America. He chose several Franciscans, including Father Perez, the astronomer, and, arriving at Hispaniola, now the Island of Haiti, laid, in conjunction with the Franciscans, the first stone of the city of San Domingo. Here, too, came, in 1505, the Franciscan Father Remi, the King of Scotland's brother, accompanied by members of his order, who established for the conversion of the Indians of Hispaniola and those of the Antilles the monastery and headquarters of the Holy Cross. It was a Franciscan priest, Jean Bernard Castori de Todi, the astronomer, who offered up the first mass on the virgin soil of America. It was also a Franciscan priest, Jean Berganon, who first addressed the Indians in their own language, and the first missionary to die and be buried in America was a member of the order, Father Allesandro.

Diega de Landa, missionary to the Quiches of Ta-

basco, and then Bishop of Yucatan in 1573, wrote the History of Yucatan, mastered the mysterious Quiche language and deciphered the hieratic Maya alphabet, was a Franciscan. He left us the key to some of the strange inscriptions on the monuments of Central America. He deciphered the weird characters on the monuments of Mayapan and Chichin-Itza; but for him, his intelligence and tireless industry, these gravings would perhaps remain a mystery for all time, like the Egyptian hieroglyphics before the discovery of the Rosetta stone and the magnificent research and ingenuity of Champollion.

Father Pierre Cousin, a French Franciscan, was the first priest martyred for Christ in America, and the first bishop consecrated for America, 1511, was Garcias de Predilla, a Franciscan, who built his cathedral in San Domingo. But I am straying far afield and I call back my wandering pen to California and the southwest of our own country.

By some mysterious centripetal force almost all the writings on the Franciscans of California converged toward one personality—Father Junipero Serra, a saintly priest. Hanging in the reception room of the ancient college of San Fernando, Mexico City, is an oil painting of the gentle priest executed one hundred and sixty years ago. It is a face full of human pathos, of tenderness, of spirituality: this painting and an enlarged daguerreotype in the old Franciscan College of Santa Barbara, Cal., are all that remain to bring back the form and features of one who will for all time fill a conspicuous place in California history. Now, good and saintly as was Father Junipero, and great and many as are the praises sung of him, he was not superior, indeed, judged by the standard of the world, he was not the equal of

other Franciscan missionaries of the southwest, whose names one seldom ever hears. If the crucifixion of the flesh, with its appetites, desires and demands; if great suffering voluntarily assumed and patiently borne; if fatigue, hunger, thirst and exposure endured uncomplainingly for God and a great cause, and if surrendering freely life itself, for the uplifting of the outcast and the accursed, be the marks of heroic sanctity and heroic men, then there were greater saints and greater men on the desert missions than Junipero Serra. Alone, away from the eye and the applause of civilized man, these lonely priests in desert and on mountain trod the wine press of the fury of insult, mockery and derision. For weary years of laborious and unceasing sacrifice, amid perils as fearful as ever tried the heart of man, they walked the furrow to the martyr's stake, nor cast one halting, lingering look behind. Their zeal, their courage, their fidelity to duty in the presence of eminent warnings; their fortitude under hunger, weariness and excessive fatigue; their angelic piety and purity of life, and their prodigious courage when confronted with torture and death, have built on the lonely desert a monument to St. Francis and to heroic Catholic charity, a monument which will endure till time shall be no more.

Of these men were Fathers Garces, clubbed to death by the Yumas; Martin de Arbide, burned alive by the Zunis; Juan Diaz, tortured by the Mojaves, and thirty others, martyred for the faith. The history of the conversion and civilization of the Indians of the California coast, Arizona and New Mexico by the Franciscan fathers, forms one of the most brilliant chapters in the martyrology and confessorium of the imperishable Church of God. By their patience, tact and kindness, by the un-

blemished cleanliness of their lives, these men of God won the confidence and affection of their savage flocks, lifted them unto firm earth, Christianized and civilized them. From Cape San Lucas to San Diego, and on to San Francisco and Los Angeles, all over Arizona, Texas and New Mexico, they established missions, built churches and taught the tribes to cultivate the land. They gathered the wandering families into village settlements, taught them horticulture and irrigation, and furnished them seed and implements of agriculture. They introduced sheep and cattle, planted vineyards, olive and orange groves, and made of these human wrecks a peaceful, industrious and contented people. They did more. They taught these men and women of unknown race and origin how to break and shoe horses, to carve in wood, to mould clay, make and lay tiles, to tan hides and make shoes, to sing and play on musical instruments, to make wine, candles, clothes, ploughs and hats; they taught them the trades of the cooper, the weaver, the saddler, the blacksmith, the painter, the carpenter, the baker, the miller, the rope maker, the stone cutter, the mason and many other civilized occupations. Some of the finer arts taught the Indians by the fathers are practiced to-day by the members of the tribes, such, for example, as embroidery in gold and silver thread, fancy basket making, moulding and annealing pottery, leather carving, lace and drawn work, from the sale of which to curio dealers and visitors the Indians draw considerable revenue. When, in 1834, a band of Catholic renegades, calling themselves the Republic of Mexico, broke up the missions, seized upon the possessions and revenues of the monasteries and Christian pueblos, the Indians were re-

duced to beggary and became human derelicts, outcasts and thieves.

Fray Junipero Serra, founder of the early missions of Southern California, was a Franciscan priest, whose unblemished life, angelic piety and habitual tenderness form a splendid pedestal for the statue of admiration erected to his memory by an appreciative public. It was on the morning of July 16, 1769, that Admiral Galvez, an upright man and a brave fighter, together with Father Junipero Serra and another Franciscan priest, sailed into the bay, landed, and founded what is now known as "the old town," a few miles away from the present beautiful city of San Diego. They brought with them soldiers and laborers, 200 head of cattle, a full supply of seeds; seeds of grain, fruit, vegetables and flowers, young vines and bulbs, with an abundance of tools and implements.

Thus by the priests of the Catholic church were introduced into California the horticultural, pastoral and agricultural industries, the civilization of the coast tribes begun, and the first mission opened. The founding of a mission and town in those days of faith was an affair of very great importance. When the men, stock and supplies were landed, and the commander of the expedition unfurled the standard of Spain, all heads were bared and a salute fired. Then the captain strode to the side of the floating flag, raised on high three times, in honor of the Holy Trinity, a large cross carrying the Image of the Redeemer. At once the commander, soldiers and men went, with uncovered heads, to their knees, bowed in worship, and, rising, chanted the "Te Deum," a hymn of praise to God and in His Name, and in the name of

the king of Spain, took peaceable possession of the country.

Having chosen a site best adapted for their infant city, the priests superintended the erection of an altar under the shade of a friendly tree. Father Junipero, robed in the vestments he had brought with him from his monastery of San Fernando, Mexico City, celebrated the first mass offered up in California, July 17, 1769, and before intoning the "Credo," feelingly addressed his companions. Far away on the hilltops the naked savages, amazed at the sight of the ship and astounded by the report of the guns, gazed with awe and wonder on the white-robed priest, the plumed commander, the uniformed soldiers, the horses and strangely horned cows and sheep. After mass the Spaniards formed in procession and moved towards the bay, whose waters the priest solemnly blessed, and in honor of St. James of Alcala, confirmed the name "Puerto (Bay) de San Diego de Alcala" bestowed upon the harbor by Vizcaino, November 12, 1603.

The following day they began the erection of a fort and church, selecting an old Indian rancheria, called Cosoy, as best suited for the site of a Christian pueblo.

The ruins of the church and fort are here to-day; two stately palms, planted by the fathers, still wave and nod with every cooling breeze, and the dear old bell, that every morning called the Indians to prayers, hangs in its rude belfry, outside the church, reminding the money-making and aggressive American that in those days men worshiped God and believed in a hereafter. In August, 1774, they changed their quarters and removed the mission and settlement six miles up the valley to a place called by the Indians Nipaguay. Here they built a

wooden church thatched with tule rushes, a blacksmith shop, storehouses and outbuildings for the men.

On the night of November 5, 1775, the mission was attacked by the savages. No intimation, no warning or provocation was given. They swooped down upon the unsuspecting Spaniards, slaughtered Father Jaume and four others and burned the buildings, including the church. Father Fustre, who fortunately escaped the massacre, wrote an interesting account of the murder of the priest and the destruction of the mission. The following year the mission was restored, and, in 1834, when the fathers were driven out by Mexican bandits, calling themselves the Republic of Mexico, the Indians were all Christians and civilized.

His old mission of "Our Lady of Sorrows," at San Diego, was destroyed during the Mexican war, but some crumbling walls yet remain, eloquent memorials of the romantic past. The few acres of land and the buildings on them, which were confiscated and sold to a Mexican politician, were recovered for the church in 1856. Beside the dear old church there is now an industrial school, where the Indian children, from the reservations of Southern California, are trained and taught by the Sisters of St. Joseph. To this little farm belongs the distinction of protecting the first olive trees planted on the continent of North America. Three miles above the school, the old dam built by the fathers and their Indian converts 125 years ago, is still in existence. From this dam, through a deep and ugly ravine, they carried an aqueduct of tiles imbedded in mortar and rubble to irrigate their gardens. The gnarled old orchard, still bearing its fruit, is as luscious as in the days when the "old mission" brands of pickled olives and olive oil were fa-

mous the world over. Indeed, they are famous yet. Nobody who is anybody visits this queenly city of the royal harbor without calling at the old mission so redolent of pathetic incident and romantic enterprise. The friendly citizens of San Diego are proud of the historic mission of "Our Lady of Sorrows," and of their beautiful harbor. One of these days, in the extensive park which they are now improving and beautifying, they will place on native granite pedestals, two statues—one of Vizcaino, who entered and named their splendid harbor, and another to Padre Junipero Serra, who first planted the cross of Christianity in Southern California.

The history of the colonization and civilization of the California coast by these brave, faithful and zealous priests, is in striking contrast with what happened in New England and Virginia, where the Indians were civilized off the face of the earth.

After establishing the San Diego mission, Father Serra pushed northward and planted a chain of Christian pueblos one day's march apart. He and his priestly companions taught their converts to cultivate and irrigate the land, raise grain, fruits and vegetables, and make their labor profitable. "I do not know," writes Mr. W. E. Curtis in the Chicago Record-Herald, "any missionary on any part of the earth—Catholic or Protestant—who accomplished more good for his fellow creatures. The heroism of Padre Junipero Serra, his usefulness, his self-sacrifice, his piety and his public services for the church and humanity entitle him to canonization."

The Franciscans, in time, established fifteen missions, baptized 60,640 Indians before the expulsion of the order, introduced horses, cattle and sheep; planted

orange and olive groves, and made of their swarthy converts a peaceful and industrious people. Left alone and in undisturbed pursuit of their apostolic work, the fathers would in time have converted and civilized all the tribes of the Pacific coast and the Southwest. From the day they opened the first mission to the Indians, until the confiscation of their property, in 1834, the fathers met with opposition and discouragement. They succeeded in conquering the hostility of the savages, eradicating their foul superstitions and winning them to a Christian and a clean life, but their virtues, self-denial and heroic charity failed to subdue the cupidity and avarice of the founders of an illegitimate republic.

From his death bed in his little monastery in Monterey, the saintly priest Junipero Serra asked his brethren to beg from God for more help in the desolate wilderness. On the night of August 28, 1784, he was dying, and his last words were: "Pray ye, therefore, the Lord of the harvest that He send laborers into His vineyard."

BOOK III.

IN THE LAND OF THE PAPAGOES

CHAPTER XVIII.

A LAND OF SCENIC WONDERS.

After thirty days' traveling by train and burro, through Sonora and this extraordinary land, I arrived here last night, filled with amazement and admiration for the wonderful work of God made manifest in the strange configuration of this land and in the marvels wrought by the hand of time. Dante Aligherie, when he breathed his last in the picturesque capital of the Exarchate, died 560 years too soon. If he were living to-day and travelled across this land of wonders, he would have seen upon the earth a region where Purgatory, Hell and Heaven had conspired to produce a bewildering viascope of all that is weird, terrible and awe-inspiring, side by side with the beautiful, the marvelous and romantic. With the possible exception of Sonora, in the Republic of Mexico, to which geographically and ethnographically Arizona belonged, there is not on the continent of America, perhaps not in the world, a land as full to repletion with all that is so fascinating in nature and startling to man.

Only a few months ago, a sailing ship from Honolulu reported that the lava from Mount Matatutu, then in active eruption on the Island of Savaii, had covered thirty square miles, while in places the flowing stream was 200 feet high, and that in a part of the island a river of lava twelve miles wide was rushing to the ocean. The tale was laughed down and ridiculed in San Francisco, where the captain of the ship made his report. Yet here, almost on the boundary line of California, there are indisputable, positive and visible proofs of a volcanic

vomit compared to which the Matatutu discharge is but an intestinal disturbance.

The San Francisco mountain, 13,000 feet high, on the northwestern edge of Arizona, is one of the most beautiful mountains in America. At some period, geologically recent, it was the focus of an igneus commotion of unequaled duration and violence. It poured out rivers and lakes of lava, which covered the land for two hundred square miles and raised it in places 500 feet. This statement may stagger belief, but any one who leaves the Santa Fe at Ash Fork and follows the trail to the Hupais village of Ave Supais, and begins the descent of Cataract Canyon, may verify for himself the enormous depth of this unprecedented flow.

Returning to Ash Fork, when the sun is declining and the sky flecked with clouds, the same man will see a sunset impossible of description, paralyzing the genius of a Paul Loraine and the brush of a Turner. Then the heavens are bathed in a lurid blood color, in purple and saffron, or gleam with vivid sheen of molten, burnished gold, when a falling cataract of fiery vermilion rests upon the purple peaks and ridges of the western mountains. I know not any land where the full majesty of the text of the inspired writer is more luminously present than here in this region of wonders. "The heavens declareth the glory of God and the firmament showeth His handiwork."

East of the Missouri river this is an unknown land, even to the well-informed American. Wealthy and presumedly educated citizens of the East spend millions annually sightseeing in Europe and Egypt, when here, within their borders, is a land where mysterious and pre-historic races dwell, where nature and nature's God

have wrought incredible marvels unlike anything seen elsewhere upon the earth, and of which the people seem to have no appreciation. The hills and lakes of Switzerland, the Alps and Appenines, to which thousands, year after year, go from America ostensibly to admire the configurations and towering heights of these historically famous mountains, can offer nothing to the eye or to the imagination to be compared to the natural wonders of their own land and of which they appear to be unconscious.

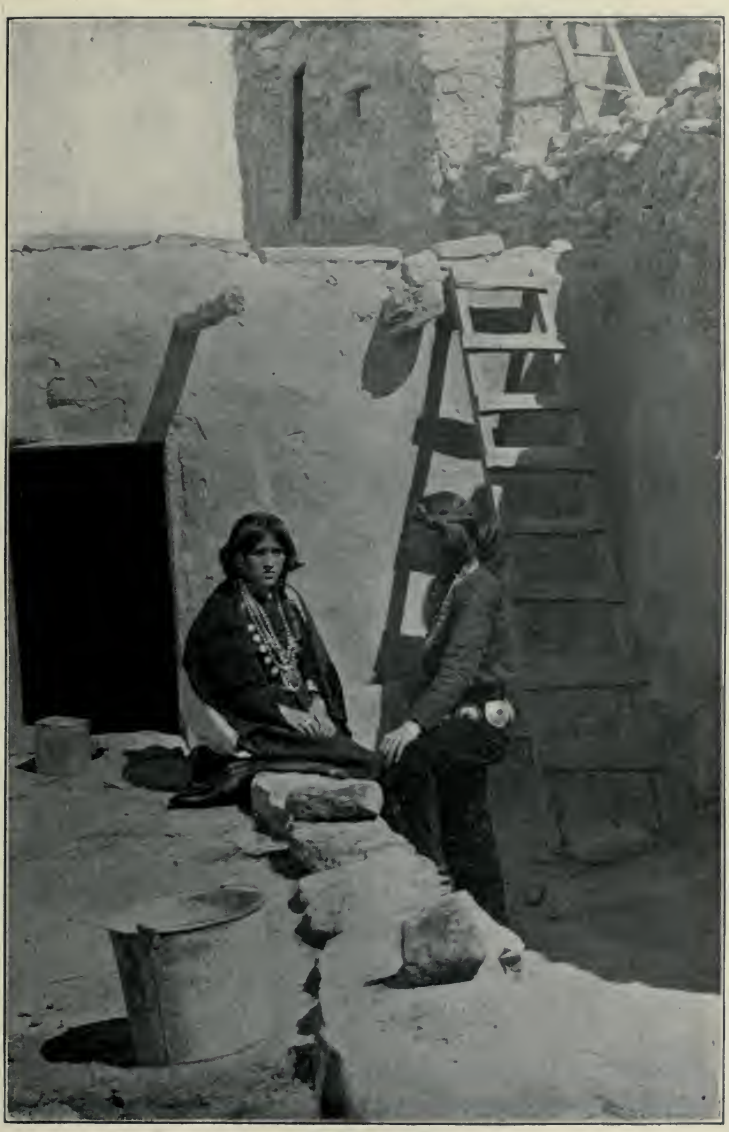
Nowhere may there be found such extensive areas of arid deserts, crossed and recrossed in every direction by lofty mountains of strange formation, as in this comparatively unknown region. Here are fathomless canyons, dizzy crags and cloud-piercing peaks and a vast array of all the contradictions possible in topography. There are broad stretches of desert, where the winds raise storms of dust and whirl cyclones of sand, carrying death to man and beast. Here are to be found dismal ravines, horrent abysses and startling canyons, in whose gloomy depths flow streams of water pure and clear as ever rippled through the pages of Cervantes. Here are the cells of the cliff-dwellers, the burrows of the troglodytes, or pre-historic cave-men, the ruins of the ancient pueblo towns, and traces of pre-Columbian tribes who have gone down amid the fierce conflicts of tribal wars and have disappeared from off the earth.

Darwin, Huxley and Maupas are welcome to their theories accounting for the origin of Man and his expansion from the brute to a civilized being, but my life among and my experience with savages have convinced me that the territory separating the civilized from the savage man could never be crossed by the savage un-

assisted by a civilized guide, while all history proves that races at one time in possession of civilization have passed over that territory and descended into the gloomy depths of savagery, where many of them yet remain. In Arizona, at least, it was impossible for the Indian to lift himself out of his degradation, for when he began his rude cultivation of the land, the ferocious mountain tribes swooped down upon him and drove him into the desert or to the inaccessible cliffs.

Following the instinct of self-preservation, he built his stone hut on lofty ledges or scooped from the friable mountain side, fifty, one hundred, two hundred feet in air, a cave which served for an observatory and a refuge for his wife and children. With a rope ladder, twisted from the viscera of the grey wolf, or the hide of the mountain lion, he climbed down from his lofty perch, returning with food and water for his miserable family. Thus began the now famous "cliff-dwellings," which seventy years ago many of our learned antiquarians thought were the dens of an extinct species, half animal and half man. Seeing and knowing nothing of the rope which was always lifted by the woman when the man was at home or on the hunt, the deduction was quite natural that no human being could scale the face of the almost perpendicular cliff.

The Moqui Indians still inhabit these strange rock lairs on the northern side of the Colorado Chiquito. There is no tribe of aborigines left upon the earth, there's no region of the world, more deserving of examination than the Moquis and the mysterious land they occupy. Here at the village of Huaipi, on a mesa or table land surrounded by sand dunes and amorphous boulders of old red sandstone, is held every second year the mystic



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MOQUI LOVERS; CLIFF PEOPLE.

rite of the "Feast of the Snake," when the tribal medicine men, or shamans, holding in their mouths and fondling venomous rattlesnakes, dance around and through the sacred fire, and rushing wildly through the assembled crowd of women and children, disappear behind the estufas and liberate the reptiles. These Moqui dwellings and the Zuni pueblos of New Mexico are the oldest continuously inhabited structures in America and probably remain more nearly in their original state than those of any other aboriginal people in North or South America.

For ethnological study it is hardly possible to overestimate the value of these strange people—the Moquis and the Zunis. In the accounts of their early explorations the Spanish missionary fathers found from eighty to a hundred cells of these pueblo and cliff dwellers inhabited in Sonora, Chihuahua and Arizona. Clearly the whole of New Mexico, Arizona and northern Mexico was occupied by these semi-civilized people, who lived in caves, stone and adobe houses, cultivated the land with stone hoes, and irrigated it with water brought in channels from the nearest river. Centuries before the advent of the Spaniards, the decline of the race began, and eventually would have ended in total savagery if the European had not entered upon the scene. Internecine wars, drought, pestilence, and, above all, the coming into the land of the fierce Apaches, or Dinnes, and their many predatory and annihilating raids, wore down the ancient race and threatened their extinction. All the adobe and stone ruins, all the remains of ditches and canals from all over the river lands of New Mexico and Arizona, are the relics of these strange people.

This is not the place to enter into a disquisition on the origin or migration of the race. I may, however,

add that in the common use of adobe, for building material, in the plain walls, rising to a height of many stories, in the architecture of their terraced structures, absence of doors in the lower stories, the ascent by external ladders to the higher, their buildings were altogether unlike any found in Mexico, Yucatan or Central America. In the absence of arched ceilings, of overlapping blocks, of all architectural decorations, of idols, temples and buildings for religious rites, of burial mounds and mummies or human remains, rock inscriptions and miscellaneous relics, the monuments of the Zunis and Moquis present no analogies with the Mayas, Quiches or any known race of people now existing.

Returning from this digression, let me continue my explorations. Here in this land of wonders is the Petrified Forest, where are to be seen trunks of giant trees over ten feet in diameter and a hundred feet long, changed from wood into carnelian, precious jasper and banded agate. Here are hundreds of tons—a riotous outpouring—of Chalcedony, topaz, agate and onyx, protected from vandals by decree of congress. Here also is the Cohino Forest, through which one may ride for five days and find no water unless it be the rainy season. There are places here where the ground is covered with pure baking soda, which at times rises in a cloud of irritating dust, and when driven by the wind excoriates the nostrils, throat, eyes and ears. There are depressions near the mouth of the Virgin River, where slabs of salt, two or three feet thick and clear as lake ice, may be cut; and mirages of deceiving bodies of water so realistic that even the old desert traveler, parched with thirst, is sometimes lured to his death.

In this territory is Mogollon Mountain, whose sides

and summit are covered with a forest of giant pine trees. At some time in the remote past, nature, when in an experimental mood, fashioned it, casting the huge freak to one side, and, laughing aloud, left it unfinished in the lonely desert. It is an unexampled unheaval, a marvelous oddity, from whose western rim one looks down 3,000 feet into the Tonto abyss, a weird depth, where ravines, arroyos, angular hills and volcanic settlings conspire to produce one of the roughest and strangest spots on the earth's surface.

CHAPTER XIX.

VEGETATION OF THE DESERT.

I cannot resist the temptation of enlarging and dwelling upon, what I may term, the natural miracles of this extraordinary region. North of Yuma, on the Colorado, there are hundreds of acres of mosaic pavement fashioned from minute cubes of jasper, carnelian and agate, a flooring of tiny pebbles so hard and polished that, when swept by the wind, is as visibly compact and regular as if each cube was set in place by an artisan and forced down by a roller. At times this floor of precious stones is entirely hidden by the sand, then a fierce desert wind enters and sweeps it clean. Nowhere, unless it be the Giant's Causway, Ireland, have I seen stones laid with such mathematical accuracy.

In this land of contradictions is the Painted Desert, with its fantastic surface of ocherous earth and varieties of marls rivalling the tints and colors of a large palette. Here, in this weird and singular territory, was opened by the Spaniards the now exhausted and abandoned mines of the Silver King and the Plancha de la Plata, where lumps of virgin silver weighing 2,000 pounds were discovered, and the Salero, where in Spanish times the padre, who had charge of the little mission, wishing to entertain with proper respect his bishop, who was paying his first visit to the camp, discovered when the table was set that there were no salt cellars. Calling two of his Indian neophytes, he ordered them to dig ore from the mine and hammer it into a solid silver basin, which he placed on the table, garnished with roses and ferns, and

presented to the bishop when he was leaving for Durango, his episcopal see.

In 1870 the last herd of wild horses was rounded up in Arizona, and here, too, corraled like the horses, and at about the same time, are the remnants of the Apaches, who, with no weapons, save bows and arrows, lance, knife and war club, defied for 250 years the fighting men of Spain and the United States.

The Standard Iron Company is now tunneling earth near the Diabolo Canyon in search of the greatest meteor ever heard of by meteorologists. When this composite visitor struck the earth it cut a channel 600 feet deep and nearly a mile in length. The land for miles around was, and is yet, covered with fragments of this star rock. Some of these pieces weighed many tons, and when broken up and reduced, ran high in valuable minerals. The size of this meteor is said to be enormous, and judging from the value of the ore scattered around the great depression, the minerals embosomed in the meteor will amount to many millions of dollars. Distinguished mineralogists of Europe and America have expressed a wish to be present when the meteoric wonder is uncovered. Here, also, solidly perched on the breast of a small volcanic hill, is the only desert laboratory in the world. This hill projects from the base of a rugged mountain range, known as the Tucson, and was selected by the Spaniards as a site on which to build a blockhouse and observatory in the days when the Apaches terrified southern Arizona. From the crest of this volcanic mount one may sweep a circular horizon within which repose in awful majesty fifteen ranges of mountains, stretching southward into Mexico, northward into Central Arizona, and extending toward the west far into

California. Within this circle the Spaniards were making history when the states of the East were a wilderness, and New York had as yet no place on the map of America. The mountains and the deserts remain as they were when the Spanish priest Marco, of Nizza, in 1539, crossed them on his way to the Moqui towns of Quivera. The vegetation even has undergone no change, for here, all around, and before you, are the giant Suaharos, or Candelabrum cacti, the ocotilla, the Spanish dagger plant, with bayonets all a-bristle, the palo verde, the mesquite, prickly pear, sagebrush, and all the wonderful varieties of desert flora for which the Arizona deserts are notorious.

The professor of botany in the University of Arizona tells me there are in Arizona 3,000 varieties of flower-carrying plants, and 300 different kinds of grasses. With the exception of the verbena and a few others, all the indigenous flowers are odorless, owing, it is said, to the absence of moisture in the air. All desert plants are protected against the greed or hunger, or, let us say, wanton destruction of man and animal, by spines or thorns. More than 680 varieties of the cactus alone have been discovered, catalogued and classified. All deserts have a botany of their own and a flora of infinite possibilities of value, and in the deserts of Arizona have been found plants of great medicinal value, many of them with unique and interesting characteristics. It is a very curious fact that the only varieties of the cactus without thorns known to exist in this region, are found growing in rock projections and ledges beyond the reach of animals. This was explained to me on the theory that, at some time in the past, this kind of cactus was common enough in the mountains, but that gophers, rabbits and other des-

ert animals had long ago consumed all that could be reached. In "Wild West" books, and even in professedly historical novels, one reads occasionally of this and that family or clan of Indians perishing of hunger or thirst. It is impossible for a normally healthy savage to die of hunger or perish from thirst on the Arizona deserts. The white man? Yes, and often, the Indian never. It is a case of God tempering the wind to the shorn lamb, or fitting the back to the burden. Under the thorns of every variety of cactus there is refreshing, nourishing and indeed, palatable food. The desert and mountain tribes knew this from immemorial times, and until they were confined to the reservations, cactus food formed a large part of their ordinary diet. They had a way of their own of stripping the needles from the plant, reaching the pulp and eating it cooked or uncooked.

There are many fruit and berry bearing cacti, and these fruits and berries were gathered in season, eaten raw or boiled, and from which a delicious syrup or juice was extracted, and an intoxicating drink, called "chaca," distilled. The pitayha and suaharo cacti grow to the height of twenty and thirty feet, and yield, when properly tapped, from ten to twenty-gallons of pure drinking water. All desert plants contain a large amount of moisture, and the professors of the Carnegie desert laboratory are now trying to find out how these desert plants, especially the cacti, extract water from a parched and sandy soil, and moisture from hot air. There is a cactus, christened by the early Spaniards, the "barrel," which is 75 per cent water, and, strange to say, thrives best in hopelessly barren lands in which no water is found within hundreds of miles, and on which no rain ever falls.

The desert laboratory for the study of the flora of barren lands, is the property of the Carnegie Institute at Washington, and was founded by Mr. F. V. Coville, of the United States Department of Agriculture, and Dr. D. Trembly MacDougal, who was for years assistant director of the New York Botanical Garden. Dr. MacDougal is now here in charge of the department of botanical research. In its specialty of purpose there is only one other institution in existence, even collaterally related to this desert laboratory, and that is the college of science established lately in Greenland by the government of Denmark, for researches in arctic regions and the study of the flora and fauna of the far north. This desert laboratory, under expert botanists, will include in its scope, the physiographic conditions of notable interest in the two great desert areas of western America, deliminated by the geologist, the botanist, and the geographer, and designated as the Sonora—Nevada desert and the Sinaloa—Chihuahua region of sand. These two regions embrace large sections of Idaho, Utah, Oregon, Colorado, Washington, Nevada, California, Arizona, Baja California, Sonora and Sinaloa. In this classification the beds of many ancient lakes are included, and with them the yet existing Great Salt Lake. Dr. MacDougal informs me that notable features in this vast body are the Snake river desert of Idaho, the Ralston sand lands of Nevada, the sage fields of Washington, the lava beds of Oregon, Death Valley, the Mojave Desert, the Colorado Desert, the Painted Desert in Arizona and New Mexico, the Salton bed and the great Sonora desert of Mexico. In the Californias—Southern and Lower—the desert vegetation and that of the coast lands meet, but, except in rare instances, never assimilate. I was

surprised to hear from the distinguished professor, as without doubt you will be to read, that if the deserts of the earth could be brought into one area they would form a continent larger than all of North America. The wonderful and peculiar vegetation of the deserts has time and again invited and received the attention of learned botanists, but not until the founding of this Carnegie laboratory was any systematic and continuous study made of desert plant life. The assistant in charge of the botanical department corresponds with the famous botanists of the world, and is daily mailing to and receiving specimens of desert flowers and plants from all parts of Asia, Africa and Australia.

It may interest my readers to learn that, in the valley of the Salt River, in Arizona, the United States government reclamation service has well under way one of the most remarkable engineering enterprises for the irrigation of desert lands ever undertaken. Before a hole was drilled for the actual work in this almost inaccessible quarter of the Salt River Canyon, a wagon road twenty-five miles long had to be blasted from the side of the fearful gorge. Fifteen miles of this road presented almost insurmountable difficulties, for it had to be run through the wildest and most precipitous portions of the awesome canyons. Then began the herculean task of preparation for controlling the turbulent waters of the river, which in the late spring become a rushing torrent. In a narrow part of this canyon the men, under expert hydrographic and civil engineers, are now building a wall of solid masonry, which, when completed, will rise to a height of 270 feet. It will inclose a lake of storaged water twenty-five miles long and 200 feet deep. Sluices and canals will carry water from this artificial

lake to the parched lands. This government contract will cost $6,000,000, and will reclaim 200,000 acres of arid land. At the southern level of the lake stands the town of Roosevelt, not very old, as you may judge by the name, but substantially built. Well, when the reservoir is finished and the waters are about to be let in, "Roosevelt must go."

CHAPTER XX.

TEMPLES OF THE DESERT.

Among all the mission churches built by the Spanish missionary fathers, within the present limits of the United States, extending from the meridian of San Antonio, Tex., to the Presidio of San Francisco, and embracing such examples as San Gabriel, outside of Los Angeles, and the mission church of San Jose, near San Diego, built by Padre Junipero Serra—of whom Bret Harte and Helen Jackson wrote so sympathetically—there is not one superior architecturally, and there are few equal to San Xavier del Bac. the church of the gentle Papagoes. The drive from Tucson to the mission is nine miles. To your left, within sound of its gurgling waters, flows the Santa Cruz, that for 400 years has filled a prominent place in the real and legendary history of Arizona. Springing from the floor of the valley, the Tuscon range of mountains and hills rise majestically to the right, and stretch southward to an interminable distance. Far away to the southwest—miles and miles away—the "Twin Buttes," inflated with copper, tower in imperial isolation. Five miles from Tucson the road suddenly rises, and at once the bell-shaped dome and the Moorish towers of the church of the Papagoes break the sky line to the south. Another mile, and we enter the reservation and are received with an infernal dissonance of barks, snarls and growls from a yelping pack of unpedigreed curs of low estate. The road winds through and around wikiups and cabins, past the humble graveyard where heaves the turf in many a mouldering heap,

and where a forest of plain wooden crosses records the sublime hope and faith of the vanishing Papago. Before entering the church, I called to pay my respects and tender the tribute of my admiration to the three sisters of the community of St. Joseph, who for years have devoted their lives to the mental and spiritual uplifting of the Indian children of the reservation. I found the class rooms clean, a plentiful supply of blackboards and mural tablets, and the walls ornamented with sacred and other pictures. The children were almost as dark as negroes, their coal-black hair falling over their shoulders and their snake-like eyes piercing and searching me as if I were an enemy. What clothes they wore were clean, and I found them as intelligent and as far advanced in their elementary studies as the children of white parents. "Sister," I said, "how often do you have mass here?"

"Twice a month, sir."

"And in the meantime?"

"In the meantime we are alone with the Blessed Sacrament."

"Oh, the bishop then permits the 'Reservation' in your oratory."

"Yes, without the Blessed Sacrament we could not live here. We three are alone. We have no amusements, no society, and, outside of ourselves, no companionship. We do our own cooking, our own washing, our own scrubbing, and teach these eighty-five children six hours a day and give them an hour's religious instruction on Sunday. We also teach some of them music, and all of them singing."

I shook hands with these heroic and estimable ladies, thanked them for their courtesies, and as I passed across the "patio" to enter the church, some lines from the

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PAPAGO "WIKIUP."

exquisite poem, "The Sister of Charity," by Gerald Griffin, unbidden, visited by memory:

"Behold her, ye worldly, behold her, ye vain,
Who shrink from the pathway of virtue and pain;
Who give up to pleasure your nights and your days,
Forgetful of service, forgetful of praise."

Before we enter the sacred and historic fane, let us go back some centuries, and from the shadowy past evoke the dead that we may learn from them something of the early days of this holy place. The first white man, of whom we have any record, to visit and preach to the Pimas and Papagoes of Southern Arizona, was that great Jesuit missionary and explorer, Father Eusibio Francisco Kino. In 1691 he left the Yaquis of Sonora on his wonderful missionary tour, and on foot crossed the deserts, preaching to the Apaches, Yumas and Maricopas on the way. Late in October, of the same year, he entered the tribal lands of the Pimas and Papagoes, and from the Pima town on the Santa Cruz, now St. Xavier del Bac, a deputation was sent to escort him to their village. When the priest entered the village, Coro, chief of the Pimas and his warriors were parading and dancing around the scalps of Apaches, whom they had defeated in battle, and before whose dark and reeking hair they were now shouting their paens of victory. Mange, the historian of the Pimas—of whom the Papagoes are a branch—says that the morning after Kino's arrival, Coro paraded before him 1,200 warriors in all the glory of war bonnets, bright blankets, head dresses of eagle feathers, scalp shirts, shields of deer hide, and gleaming lances. Father Kino remained here two or three weeks, teaching and instructing the tribe in the

Christian religion, and when about to leave, marked on his chart the Pima valley and gave to it the name of San Francisco Xavier del Bac, perverted by local usage into "San Xavier del Bac." This intrepid missionary traveled through Lower California, Sonora and Arizona, instructing the desert Indians and baptizing, according to Clavigero, 30,000 infants and adults. From 1691 to 1702 he visited all the tribes of these regions, solving many interesting problems of ethnology, erecting missions and collecting vast treasures of information about the land and its wonderful people, the Yumas, Apaches, Opates, Pimas and Zunis. He reached the Gila in 1694, and said mass in the ancient ruin, the "Casa Grande," which is yet standing, in splendid isolation, amid a waste of burning sand. In 1700 he built the first church, and, according to his biographer, Ortega, "He used a light, porous stone, very suitable for building."

The church records are extant from 1720-67, and show that during these years twenty-two Jesuit fathers successively administered Bac and neighboring missions. In 1768 the Franciscan fathers succeeded the Jesuits. In that year Father Garces assumed charge of this Pima mission. This extraordinary and saintly priest was one of the great men of these early days. In his quest for perishing souls he visited all the tribes of Arizona, crossing deserts, scaling mountains and enduring famine, thirst and insult. He mapped, charted and named mountains, rivers and Indian settlements. He took latitudes and longitudes, and was the first white man to have reached the Grand Canyon from the west and give it a specific name. His diary or the itinerary of his travels was translated into English last year by that eccentric, but honest, bigot, Elliott Coues. With Mr.

Coues' historic, topographic and invaluable notes, the diary of the priest, in two volumes, is a splendid addition to the ethnographic literature of the Southwest.

On the 19th of July, 1781, the great priest was murdered at the mission of the Immaculate Conception—now Yuma—in an Indian uprising against the Spaniards. The cornerstone of the present beautiful church of the Bac mission was laid by the Franciscan fathers in 1783, and the date, "1797," still legible over the door, records, no doubt, its completion. The historian, Hubert H. Bancroft, calls the church a "magnificent structure," and devotes three pages of his History of Arizona to this mission. In 1828, soon after Mexico broke away from her allegiance to the mother country and declared herself an independent republic, chaos reigned, and the fathers were compelled by the force of circumstances to abandon their missions in Arizona. The Pima and Papago converts assembled in the church every Sunday and feast day, and for years, in fact until the return of a priest appointed by the Bishop of Durango, said the beads, sang their accustomed hymns and made the stations of the cross. The historic building shows sadly the wear and tear of time and threatens to become a melancholy ruin in a few more years.

Some time, let us hope, a gifted and conscientious historian will appear and do for the early missionaries of the Southwest, for the Kinos, the Garces, the Escalantes and the other saintly and heroic priests and martyrs, what Parkman has done for the early Jesuits of Canada and New York, and Bryan Clinch for the Spanish missionaries of Southern and Lower California. It is popularly believed that Coronado, on his way to the Zuni pueblos of New Mexico, was the first white man to gaze

upon the now historic ruins known as the Casa Grande. I have once or twice mentioned the name of Father Eusebio Kino, a distinguished missionary and a heroic character, who merits more than an incidental reference in a book of travel, or in a history of Northern Mexico, or of the Southwest of the United States.

Adolph Bandelier, Charles F. Lummis, and that indefatigable historical burrower and delver into musty manuscripts, the late Dr. Elliott Coues, have settled for all time, that neither Coronado nor any one of his men ever saw or heard of the "Casas Grandes"—the great buildings of Southern Arizona. The Jesuit priest, who was the first white man to see and explore the mysterious building—was Father Eusebio Kino, one of the most illustrious and heroic men that ever trod the Southwest, if not the American continent. The record of the travels and missionary labors of this magnificent priest are to be found in Bancroft's History of Arizona and Sonora, in Elliott Coues' "On the Trail of a Spanish Pioneer," in the "Diario" of Juan Mateo Mange, a military officer who was with Padre Kino in some of his "entradas," or expeditions, and in the first volume of the second series of the work entitled "Documentos para lo Historio de Mexico," printed in Mexico City in 1854. Lieutenant Mange, in his journal, writes of Father Kino, whom he knew intimately: "He was a man of wonderful talents, an astronomer, a mathematician, and cosmographer."

Before I relate the incidents associated with the discovery of the now famous ruins, the Casas Grandes, by Father Kino, let me hurriedly record something of the life and history of this remarkable priest and model missionary.

Eusebio Francisco Kuhne—or, as the Spaniards pronounced it, Kino, was born at Trent, Austrian Tyrol, in the year 1640. He was a blood relation of the famous Asiatic missionary, Father Martin-Martin. After graduating with honors, particularly in mathematics, Kino declined the chair of mathematics in the University of Bavaria, tendered to him by the Duke of Bavaria. Turning aside from the promise of a distinguished future in Austria, he entered the Society of Jesus, and asked for a place on the foreign missions. Arriving in Mexico in 1680, the year of Newton's comet, he was drawn into a friendly discussion on the origin of comets and the solar system, with the Spanish astronomer, then in Mexico City, Siguenza y Gongora. His remarkable familiarity with authorities and his great knowledge of the solar systems, determined his assignation to duty in Lower California as cosmographer major on Admiral Isidore Otondo's expedition of 1683.

Returning from Lower California, he was assigned by his ecclesiastical superior to the mission of Sonora, which then embraced all southern Arizona. On December 16, 1687, he left the Jesuit college at Guadalajara, and traveling by burro and on foot, arrived in Sonora, where he founded the mission of "Our Lady of Sorrows," which remained his headquarters until his death. Now begins his wonderful career.

Leaving his Indian mission in charge of an assistant priest, he struck out for the Mayo hunting grounds, and entering the valley of the Rio Magdalena, preached to the Mayos, and gathering them in, founded the pueblo or village settlement of St. Ignatius. He now swung toward the north and established among the Humori the pueblo of St. Joseph of Humoris, now known as Imuris.

Returning to his mission of Our Lady of Sorrows, he waited for the coming of Father Juan Maria de Salvatierra, the superior and visitador, or visitor of the Indian missions of Mexico. This was the Father Salvatierra who established the "Pious Fund" for the California Indians, and who afterward opened the mission to the Digger Indians and became known as the Apostle of Lower California.

A few days after the arrival of Salvatierra, the two priests set out on a missionary itinerary, visiting and preaching to the tribes of northern Sonora, till they came to Cocaspera, near Nogales, where they separated; Salvatierra returning by Our Lady of Sorrows to Guadalajara.

Father Kino tarried for some time at Cocaspera, instructing the Indians, and early in May, 1691, started on his historic desert journey to the Santa Cruz valley, where he preached to the Pimas and founded the pueblo and mission of San Xavier del Bac.

To describe the fatigues and hardships of a journey in those days from Nogales to Tucson, to record the varied and very interesting interviews and experiences with the tribes, many of whom had never before seen a white man, to relate the hardships and trials of the great missionary, would put too severe a tax on my readers, so I hurry on to the Casas Grandes.

In 1694 Lieutenant Juan Mateo Mange, nephew of Petriz de Crusate, ex-governor of New Mexico, was commissioned to accompany Father Kino on his visits to the Indian tribes, and on his exploring expeditions, and to report in writing what he saw and learned. Mange joined the great priest at his mission of Our Lady of Sorrows on February 7, 1694; they crossed the Sierra

del Comedio, and on the 15th reached the coast, first of white men from Pimeria Alta—from the west—to look out upon the waters of the great gulf. At Turbutana, Mange left the priest for a time, and went up the Colorado river to a rancheria named Cups, so called from a smoking, rocky cave in the neighborhood. Returning he joined Kino at Caborca, bringing news of famous ruins said to exist on the banks of a river entering into the Colorado, or River of the Immaculate Conception, as Kino christened it. This was the first intimation the Spaniards had of these remarkable buildings. The party now returned to the mission of Our Lady of Sorrows, Sonora. While here, some Indians, Pimas from San Xavier, on the Santa Cruz, Arizona, came on a visit to the priest, who questioned them on the existence of the pre-historic ruins near the Gila river. They informed him that these wonderful ruins were standing on the desert, but of their origin they knew nothing.

In October, 1694, Kino, accompanied and settled Francis Xavier Saeta as missionary at Caborca, where he was murdered by the Yumas, April 2, 1695. Leaving Saeta at this mission, Father Kino now set out alone on an expedition to the Casas Grandes. He reached the Gila, camped for the night, and on the morning of November 30, entered the region of the ruins, and in the largest of the three buildings offered up the Holy Sacrifice of the Mass. Mange, on page 25 of his published report, in Spanish, gives the whole history, and bestows great praise on Kino.

The priest was the first white man who saw and accurately described these now famous pre-Columbian ruins. This wonderful priest tramped the valley of the Santa Cruz to the Gila. Passing down the Gila to its

mouth, after exploring the country, he retraced his steps, penetrating the land north of the Gila river for some distance, and ascending the Salt river and other northern branches of the Gila. His explorations did not end here. Proceeding east, he explored the valley of the San Pedro and its branches, then the Gila to the Mimbres, and on to the Rio Grande and the Messila valley. He went from Yuma, crossed the Colorado desert, and traced the Colorado river to its mouth. He visited sixty-three tribes, sub-tribes and families, studying the wars, customs, traditions, folk-lore and habits of the Indians. He founded missions, built churches, made maps and tracings, took observations and left us a mass of valuable information on the botany, geology and temperature of the country. His map was in his time, and long after his death, the best delineation of Sonora, southern Arizona and the gulf coast of Southern California. His life was an unparalleled record of devotion, heroism and dauntless courage. Of him we may repeat what Bacon wrote of Pius V., to whom Christendom is indebted for the victory of Lepanto: "I am astonished that the Roman church has not yet canonized this great man."

On February 5, 1702, Father Kino, accompanied by Father Gouzalez (the same missionary who was with Kino on his excursion to the mouth of the Colorado), started on a missionary expedition to the Gila Indians, and went from tribe to tribe, till he arrived at the mission of St. Ignatius on the Colorado river. Here Father Gouzalez, worn out with hardship and illness, lay down and died. After giving Christian burial to his priestly companion, the great priest returned to his mission in Sonora. His report of his entrada, or expedition, bears the date April 2, 1702. He never again saw the Colorado

or Gila. He was growing old, and his strong constitution was beginning to give way under the weight of years, and the wear and tear of missionary travel and missionary labor. His last, and, in a sense, his most extended journey, was made toward the north, during the autumn of 1706. He left his mission late in October, and swinging around by way of Remedios, made his wonderful tour to the Santa Clara mountains, preaching to and evangelizing the tribes on his way. From the summit of Santa Clara he looked out for the last time on the waters of the Gulf of California, noting the continuity of Lower California from Pimeria, the main land, and fixing for all time its peninsular character. This was the last, long, earthly pilgrimage of the great Jesuit and typical missionary, whose explorations and fearless endurance on behalf of perishing souls, lift him unto a plane of canonization and a pedestal of fame. He returned to his mission in Sonora, where he passed his few remaining years, training his swarthy converts in decency and clean living, making short visits to neighboring pueblos, and adding by his heroism and saintly life another name to the catalogue of brilliant and wonderful men for whom the world and the church are indebted to the Society of Jesus. He died in 1711, aged 70, having surrendered thirty of these seventy years to the saving and civilizing of the Sonora and Arizona members of that strange and mysterious race, the American Indian.

Let us hope that some day a Catholic Parkman will appear, gifted with his marvelous fascination of style, his tireless industry, his command of language, with an appreciation of the supernatural, and an admiration of saintly asceticism, which the Harvard master had not,

and do for the dauntless Spanish missionaries of Lower California, the coast and the Southwest, what Parkman did for the French missionary priests of Canada and western New York, when he bequeathed to us his immortal "Jesuits of North America."

CHAPTER XXI.

A MIRACLE OF NATURE.

On the earth's surface there is no plat of ground bristling with sharper problems for the microscopist, or that offers to the analyst more interesting specimens for examination, than the eight or ten square miles of land in northeastern Arizona, known as the Petrified Forest. Here nature exults in accomplished miracles, in marvelous and seemingly impossible transmutations, in achievements transcending imagination and the possibilities of science. Here, where the giant trees fell in the days before man was upon the earth to count time, they lie to-day, with shape and outline unchanged, with bark and cell and nodule unaltered to the eye, with everything the same save that alone which constitutes a tree and gives to it its own specific name. Here, for miles around, the land is chased with unpolished jewels, which ask but the touch of the lapidary's art to reproduce Milton's "firmament of living sapphires." They remain with us to bear imperishable testimony to the declaration of the evangelist, that, "with God, all things are possible."

When the adventurous Spaniards returned home from the Orinoco and the shores of the Spanish Main, after their fruitless expedition in quest of the "El Dorado"—the gilded man—and told of the wondrous things and monstrous creations they had seen—the Lake of Pitch, the disappearing rivers, the land and sea monsters, the men with tails, the Amazons, the female warriors who gave their name to the greatest river in America—the

world marveled, but believed. Yet when Andres Dorantes and Alonzo Maldonado returning after years of wandering in the desert and mountain lands of southwestern America, recorded the existence of a great forest they had visited, where precious stones of jasper and onyx strewed the ground, and where trees of agate and carnelian, blown down by a mighty wind, encumbered the earth, there was an uppricking of ears among the learned men of Madrid, then a wagging of heads and finally loud and incredulous laughter. As well ask them to believe in the existence of a herd of cattle suspended in mid-air, frozen into rigidity and retaining their shapes and outlines. Yet the forest was here and is here now, unchanged and unchangeable.

In the memorial to congress, adopted in 1895, by the legislative assembly of Arizona, requesting that Chalcedony Forest be made a national park, the area of the forest is defined to be "ten miles square, covered with trunks of agatized trees, some of which measure over 200 feet in length, and from seven to ten feet in diameter." In this official statement we have the limits of the wonderful region accurately defined, and the material of the trees recorded.

I have seen the petrified trees of Yellowstone Park, some of them yet standing, the stone trees of Wyoming, and those of the Calistoga Grove of California, but the petrified region of Arizona is the only place in the world where the trees are in such number as to merit the name of a forest. In delicacy of veining, in brilliancy and variety of coloring, they outclass all other petrifications. But Professor Tolman, the geologist of the University of Arizona, tells me there is another notable distinction which places this forest of chalcedony in a class by itself.

The trees are much, very much more ancient than those of Yellowstone park. Of course, I cannot mark time with Professor Tolman when figuring upon the very remote beginning of creation. I am yet a Christian, and will, I am satisfied, die in my belief in revelation. My studies in archaeology and paleontology but confirm me in my attachment to the orthodox school of theology. Dr. Tolman and the school to which he belongs count by millions of years, I count by thousands. "The petrified trees of all other known localities," said the learned professor of geology, "are of tertiary age, while the Arizona forest goes far back into Mesozoic time, probably to the Triassic formation. The difference in their antiquity is therefore many millions of years."

And, now, before I attempt to describe this great wonder, as it appeared to me, let me for a moment linger by the wayside. About sixteen years ago there was a man named Adam Hanna, who lived between the Santa Fe railroad and the nearest point to the petrified forest. When the officials of the road decided to build a station due north of the forest and about eight miles from the Natural Bridge, they gave it the name of Adamana, in compliment to Mr. Adam Hanna, upon whom fell the honor of conducting scientists and visitors to the forest. At Adamana, I stepped from the train, and, with a companion, took the stage for the petrified lands. Midway, between the station and the Natural Bridge, we left the wagon and struck across the country to visit the ruins of an Indian pueblo and fortification, whose people had disappeared many years before the Spaniards crossed the mountains of Arizona. Approaching the ruin we entered the tribal graveyard, where some years ago a vast accumulation of silver and copper ornaments, of agate

spearheads, arrow tips of jasper and obsidian and beautiful pottery was unearthed. These were buried with the dead, whose bones had wasted to dust many years before the white vandals had rifled the graves. The prehistoric buildings are now a confused mass of sun-dried brick and sandstone, but when Mulhausen was here sixty years ago, the divisionary lines of 300 houses or rooms were traceable, and a few feet of a wall standing. When the exploring party for the Pacific railroad passed here in 1853, it was said that traces of unique pictographs or symbolic writings yet remained on the face of a neighboring cliff. A little to the west of Chalcedony Park are the remains of another abandoned village. A few scattered huts are still nearly intact, unique, ghost-like, alone, unlike anything found elsewhere upon the earth. The material entering into their construction is like unto that of which the New Jerusalem of the Apocalypse is built, for "the building of the walls thereof are of jasper, and the foundations adorned with all manner of precious stones."

The ancient builders selected silicified logs of uniform size for their dwellings, and, with adobe and precious chips of Chalcedony, chinked the valuable timbers. Never did prince or millionaire choose more beautiful or more imperishable material for even a single room of his palace than the trunks of these trees which stood erect ages before the first man saw the setting sun.

When I entered the wonderful forest and ascended an elevation from which I could command my surroundings, I experienced a feeling of disappointment. From magazine articles and letters of travelers, I was led to believe that this mystic region was a dream of scenic joy. I confess I was keyed up too high by these descrip-

tions, and for a time was not in accord with my environment. The land here is a desert, lifted 5,000 to 6,000 feet above sea level, and cut up into small mesas or table levels, into many ridges, buttes, gulches and miniature ravines carrying little vegetation. Flowing southward, into a winding channel, is the Lithodendron (stone river), or, more correctly, creek. The valley of this river at a certain bend widens out to the east and west, forming an alluvial depression whose banks and slopes are rugged, spurred and ravined. Here one enters the heart of the petrified forest, and the section known as Chalcedony Park. And now everything and the position of everything are startling. On the knolls, spurs and isolated elevations, in the hollows, ravines and gulches, on the surface of the lowlands, piled up as if skidded by timbermen or flung recklessly across each other in heaps, lie the silicified logs in greatest confusion. Everywhere, with unstinted prodigality, the ground is sown with gems, with chips, splinters and nodules of agate, jasper and carnelian of all shapes and sizes, and displaying all the colors of the lunar rainbow.

Buried in the sand hills rising above the valley to the west, are petrified logs squaring three and four feet at the butts which protrude from the beetling bluffs. Curiously enough, specimens from these trunks are not of agate color, but of a soft blending of brown and gray and absolutely opaque, while chips from the trees in the valley are translucent, and many of them transparent as glass. The state of mineralization in which many of these valley trees are found almost lifts them into material for gems and precious stones, opals, jasper, amethysts and emeralds. One of the most extraordinary features of this marvelous region is the Natural Bridge, an

agatized tree, spanning a miniature canyon twenty-five feet deep and thirty feet wide, on which a man may safely cross. The tree is in an excellent state of preservation and shows no marks of sand abrasion; it lies diagonally across the ravine and measures a span of forty-four feet. From end to butt the tree is 110 feet long and, as with all the stone logs of this quarter of the forest, there are no branches adhering to top or body. So much of the material of the forest retains its natural color, bark and shape, and so true is the piling that looking on them one would be inclined to believe that some settler, who was clearing the land, had left for dinner and might at any moment return and fire the pile. Another very singular and as yet unexplained phenomenon are the rings or divisionary markings encircling many of the logs from end to end. These ring marks girdle the trunks every eighteen inches and do not vary the eighth of an inch. Either by the disintegration of the mesa or by torrential floods the trees have been carried down from higher levels and in the moving suffered many fractures, some of them being broken into fragments. Now all these logs, measuring from twenty to ninety feet, broke transversely and every time the break was on the ring. How these rings were formed remains to this day an unsolved problem. The material of these trees is so hard that some years ago an abrasive company of Chicago made preparations to grind the logs into emery. Their plant was brought from Chicago to Adamana, where it is now falling to pieces from rust and neglect. In answer to my enquiry why it was not set up, I was told that a Canadian company, at about the same time, began at Montreal the manufacture of abrasive sand and lowered the price of the material below the

point where it would pay to grind up the trees. Out of this agatized wood have been manufactured most beautiful table tops, mantels, clock cases, pedestals and ornamental articles. But the cost of sawing, chiseling and polishing make the goods very expensive. To give you an example. When Tiffany's workmen started to saw off a section from one of these logs to form a pedestal for the silver vase of the Bartholdi presentation, they began with a six-inch saw of Sheffield steel aided with diamond dust. Sawing eight hours a day, they were five days cutting through a four-foot log which wore their six-inch saw to a ribbon one-half inch wide. Although there are millions of tons of the petrified material scattered around this region, the lust of gain and accumulation, which becomes a passion with some of us, would soon strip the forest to the naked desert if congress had not intervened to save it. For forty years' despoilers have been rifling the land, gathering and shipping the silicified wood to the east. Much has been sold to museums and private collectors, but much more has been shipped to dealers and manufacturers. Visitors to the park may carry away with them a few specimens, but no dealing or trafficking in the precious material is now permitted.

CHAPTER XXII.

THE PRE-HISTORIC RUIN.

I am writing near the foothills of the Catalina mountains and from the bed of an evaporated inland sea. It is now a desert whose vegetation is unlike anything seen east of the Missouri river. Around me tower the statuesque "pithaya" or candelabrum cactus, bearing in season luscious fruit; the massive bisnaga, of wondrous formation and erratic habits, whose fruit is boiled by the Maricopa squaws and made into palatable candy. From the slopes of the mountains spring giant specimens of the thorny "sahuaro," resembling from afar monuments erected by man to commemorate some great historical events in the life of the early people. Further down, near the bed of an exhausted stream, are patches of withered "palmilla" or bear's grass, from which the Pima women make waterproof baskets. Around the desert, miles and miles away, rise porphyritic mountains, the Rincons, the Santa Rita, the Tortillitas, grim, savage and withal picturesque and weirdly fascinating. Their rugged sides are torn, gashed and cut to pieces, their cones now cold and dead, stand sharp and clear against a sky of opalescent clearness. In times past, in years geologically not very remote, the flanks of these towering hills were red with fire and their peaks ablaze with volcanic flame.

Gazing on them from afar you experience a sensation of awe, a consciousness of the earth's great age dominates you, and down the avenues of time, down through the ages there comes to you the portentous question of

the inspired author of Ecclesiasticus: "Is there anything whereof it may be said: see, this is new; it hath been already of old time, which was before us." Almost within gunshot of where I sit repose in solitary isolation a group of buildings, the despair of antiquarians and historically very old. The central building is a large edifice, whose adobe walls have resisted for many centuries the erosion of time, the abrasion of drifting sand and the wear and tear of torrential storms. This is the now historic "Casa Grande" or Great House, so named by the early Spanish explorers. Its walls are almost oriented to the four cardinal points, built of adobe blocks of unequal length and laid with symmetry in a cement of the same composition as the walls. This famous group of ruins rests on a raised plateau, about two miles to the south of the Gila river, in the midst of a thick growth of mesquite. Many of the buildings, from two to four stories high, are now roofed and kept in repair by the United States government, and are included in the protected governmental reserves. Around the principal buildings are heaps of ruins and many acres of shapeless debris, all that remain of an ancient Indian town or pueblo that was abandoned long before the daring Spaniard, Francisco de Coronado, in 1540, entered Arizona.

It was through this wild and mystic region that Padre Marcos made his weird expedition in 1539 in quest of the elusive seven cities of Cibola. In his report of his explorations he mentions the great buildings, then known to the Pima tribe by its Indian name of "Chichilitical." Here, too, after wandering over thousands of miles of mountains and barren deserts, passed the daring adventurers and explorers, Pedro de Tehan, Lopez de Cardines and Cabezza de Vaca, the solitary survivors of Nar-

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RUINS, ANCIENT AND MODERN.

vaes' unfortunate expedition which went to pieces at the mouth of the Suwanee river, one hundred years before De Soto crossed the Mississippi. After them came the fearless and saintly missionary, Padre Eusebio Kino, so highly praised by Venaga, the early historian of California. Of the time when the Casa Grande was left desolate before the coming of the Spaniards as early as 1539, or when the ground was broken for the foundations of the town, whose walls even then were an indistinguishable heap of ruins, the neighboring tribes had no tradition. It is really wonderful how these structures of sun-dried brick have resisted the ravages of decay and the elements for 500 years of known time.

These mysterious people carried from the Gila River an irrigation canal three miles long, 27 feet wide and 10 feet deep, and converted the barren sands around them into fertile gardens. The word "pueblo" in Spanish means simply a village, but in American ethnography it has obtained a special significance from the peculiar style of the structures or groups of buildings scattered along the Gila and Salt River valleys, whose architecture was unlike that of any buildings found outside the northern frontiers of Mexico, Arizona and New Mexico. The most fertile valleys of these regions were occupied by a semi-civilized and agricultural race. The face of these lands was dotted with buildings five and six stories high, held in common by many families, and in many instances the houses and villages were superior to those of the new existing pueblo towns. They were built for defense, the walls of great thickness and the approaches in many cases difficult. At least a century, perhaps many centuries, before the coming of the Spaniards, the decline began and continued with the certainty of a decree of fate,

until but a mere remnant of the town builders and their singular structures now remains in the valley of the Rio Grande and the land of the Moqui. Bartlett and Hubert Bancroft, the historians, are of the opinion that, at one time, in the Salt River country there was a population of 200,000 Indians—Pimas, Maricopas and Papagoes—of whom but a pitiful remnant now remains. Of a certainty, tribal wars and, it may be, famine and pestilence wore down the race and in a few years the white man's vices and the white man's diseases will finish them. Whether they would ever have advanced beyond their rude architecture and simple hoe culture is very doubtful. I am of the opinion, from a study of and experience with the Brazilian tribes, that when the Europeans came to the southwest the indigenous people were descending from barbarism to savagery, and, like the Aztec tribes of Mexico, would, with the march of time, become cannibals. Savage man cannot of himself move upward. The negro of equatorial Africa was a savage long before the time of Herodotus; for four thousand years he took not one single step toward civilization, and Livingstone and Stanley found him the same brutalized man that he was in the days of the first Rameses. St. Paul, two thousand years ago, in language that admits of no equivocation, said that it was impossible for man to attain to a knowledge of the higher truths without a teacher. The low state of some of the American tribes, the South Sea islander, and the African savage, when first encountered by civilized man, would seem to prove that, unassisted by a higher type of the human race, the savage cannot rise out of his degradation. And if even man, when having gone down to savagery, could never ascend the steep decline he had once trodden, how was it possible for the

half-ape—half-man of the Agnostic to lift himself to a higher plane? I cannot resist the malicious suspicion that all these puerile and violent attempts to account for the origin of man were intended to destroy the credibility of revelation and belief in the divinity and perpetuity of Christianity.

Here, near the Casa Grande, I saw for the first time the alligator lizard or "Gila monster," imprisoned in a wire enclosure on the ranch of a Mexican vaquero. Full grown, this repulsive reptile is three feet long, of a black-brownish color, with the snout of a crocodile and the eye of a snake. The hideous and venomous thing bore an evil reputation three thousand years ago. He is the only surviving reptile that answers to the Biblical description of the cockatrice or basilisk. In those early days it inspired loathing and was shunned for its subtlety and dreaded bite. It was selected, with the asp and other poisonous creatures, by Isaiah to illustrate the benign influence of our Divine Lord in subduing the fierce passions of men which he compared to ravenous beasts and poisonous reptiles. In prophetic allegory the inspired Judean foretells the time when "the suckling child shall play on the hole of the asp and the weaned child shall put his hand in the den of the basilisk." Is the bite of this repulsive creature fatal? When the Gila monster attains its growth and is not in a torpid or semi-torpid condition its bite is as serious as that of the rattlesnake. When young or in a torpid state, often for four months of the year, the "hila" does not secrete poison. Ignorance of the habits of the reptile have led to interminable disputes and discussions making an agreement of opinion impossible. When I was in Yuma I met a surgeon who, last year, treated two men who had been bitten. I need

not enter into the details of how they happened to be bitten. One man came to the surgeon last November, three hours after the "hila" sank his teeth in his hand. The doctor cauterized the wound and the man experienced no more inconvenience than he would from the bite of a gopher. The other man, Ernest Phair by name, was bitten at four in the afternoon, had the wound cauterized and treated with antiseptics two hours after the bite. At 10 o'clock that night he was "out of his mind," his limbs became shockingly tumefied and at 2 o'clock in the morning Phair died. This loathsome creature of giant wrack is disappearing and in twenty or thirty years it will be extinct. Reference here to Yuma reminds me that nowhere in the southwest have I seen tramps, hoboes and yegg men behave themselves as well as they do in this town. When I mentioned this good behavior of the "floating brigade" to Sheriff Livingston he said that conditions made for it. "You see," continued the sheriff, "there is practically no escape from Yuma for a criminal. The only avenues open are the railroad and the river. To strike across the country would mean death from thirst on the desert. This accounts for the fact that the tramps and hoboes are very peaceful in Yuma. The river and railroads offer no hope to an escaped prisoner, for they are too well policed."

Accompanied by a guide, I left Casa Grande early in the forenoon on burros or donkeys, and struck southeast across the Aravapi desert, hoping to reach the historic town of Tucson some time in the afternoon of the next day. Passing over ten miles of desert we entered the canyon of Santa Catalina in the mountains of the same name. For four miles we traveled through a dark and dismal gorge enclosed by walls 1,000 feet above the trail

and no place wider than an ordinary street. Wherever a cat could stand a cactus grew, whose thorny plates matted the face of the escarpment. Sheltered from the sun by walls of solid granite, porphyry or basalt, the great pass was cool and the silence intense. Here and there were piles of loose stones and boulders deposited when the rains of the summer solstice swept madly down the flanks of the Catalinas and swelled this gorge to a rushing torrent. When we emerged from the gloomy canyon we saw before us another desert, stretching away many miles to the Santa Rita range, supposed by the early Spanish explorers to contain fabulous hordes of gold and silver. To our right rose the Baboquivari, the sacred mount of the Papagoes. Across this desert four hundred years ago marched the Spanish missionary and explorer, Father Marcos of Nizza, on his way to the Zuni towns in northern Arizona to bear a message of salvation to these strange people, "who sat in darkness and in the shadow of death."

CHAPTER XXIII.

A CITY IN THE DESERT.

Nowhere is the dividing line between the old and the new so sharply drawn as in Tucson. I do not mean the growth from a frontier or bush village into a city or that of a mining camp into a town as in the mineral states. To this transition we are accustomed. Here the modern city has grown away from the old Mexican pueblo which is yet a numerically strong part of it, growing out into the desert, leaving the quaint old Mexican village in possession of the fertile valley of Santa Cruz. It is not a divorce—*a mense et thoro*—from bed and board, nor yet a separation, but rather a spreading out, an elongation of the young giant towards and into the desert. The historic pueblo, so full of romance and story, is left in possession of its own ground, its own religion, language, tradition and customs. Its people have a voice in the selection of the mayor and are eligible for any office in the gift of the citizens, are protected by the same laws and the same police as are those of whiter color.

Tucson had a name and was a rancheria of Pimas, Papagoes and Sobaipuri before the great missionary, Padre Kino, visited it in 1691. He was the first white man that ever crossed the Santa Cruz from the west and entered Tucson. In 1773 it was still a rancheria, but many of its swarthy denizens had already been received into the church; it was visited regularly by the priests of San Xavier del Bac and was now San Jose de Tucson. In 1771 the Spanish garrison or presidio at Tubac was shifted to Tucson, a resident priest appointed and the

adobe church of St. Augustin built, the walls of which are yet standing on the east bank of the Santa Cruz, one of the disappearing rivers of the southwest. With the coming of the railroad in 1880 the really modern Tucson begins. In 1803 two meteoric bodies were found here weighing respectively 1,600 and 632 pounds. The rubbish that has been written about Tucson in the newspapers, books and magazines of the east, is only matched by the myths and fables published about Santa Fe. From before Father Kino's visit in 1691 Tucson was never heard of. Since then, down to the building of the Southern Pacific, its history is a record of blood and murders, of Apache raids, of Mexican feuds and American outlaws, gamblers and hold-up men who exterminated each other or were lynched by the law-abiding citizens. To-day Tucson is a city of law and order and will soon be the metropolis of Arizona. So much by way of a preface and now let us continue our impressions of the city.

The early Spaniards civilized and Christianized the Aztecs of Mexico and intermarried with them. From these unions were begotten the race known to-day as Mexican, though the average American very often confuses—and very annoyingly to the Mexican—the Indian tribes of the Mexican republic with the descendants of the Spanish colonists and military settlers and the daughters of the warriors of Montezuma. The Spaniards did something more. They imparted to their descendants courtesy, civility and high ideals. They taught them all those nameless refinements of speech and manner which impart a gracious flavor to association and a charm to companionship.

I cannot help thinking that the Americans of Tucson have profited very much from their intercourse with the

Mexicans, for nowhere in the southwest have I met a more civil and companionable people.

The modern American is so full of the spirit of commercialism and the demon of material progress; so masterful in all that makes for political expansion and the achievement of great enterprises, that he is in danger of forgetting his duties to God and the courtesies of social life.

To-day I took my second stroll through the Mexican section of Tucson and noted the slow but steady encroachment of Anglo-Celtic influence. I saw with regret that many of the old Spanish names of the streets had disappeared and that other and less euphonious ones had replaced them. The Calle Santa Rita has gone down in the struggle to hold its own with the "gringo" and Cherry street has usurped its traditional privileges, and our good-natured friend McKenna has his Celtic name blazoned where Santa Maria del Guadeloupe, by immemorial right, ought to be.

But, with the exception of these street names, the adoption of a more modern dress, and the absence of old time customs, fiestas and ceremonies, or their modification, the people are the same with whom I mingled two years ago in Zacatecas, Cuernavaca, and other towns in Mexico. Here are the narrow streets, with rows of one storied flat-roofed houses of sun baked brick, or adobes, with here and there a house whose floor is "rammed" earth. Remember that lumber here a few years ago cost $80 the thousand. In early times there were houses with not a solitary nail anywhere in or about them, for the window frames and doors were held in place by strips of rawhide. The women no longer wear the many-striped "Rebozo" or the "Tapole" which concealed all the face but the left

eye. The Moors, who held possession of nearly one-half of Spain for almost 800 years, grafted on the Iberian race many of their own customs, manners and Oriental dress. The Spanish women inherited from them the "Rebozo," the "Tapole" and concealment of the face, and the Mexican senoritas adopted the dress of their Spanish sisters. I found the men leaning, as of old, against the door jambs and walls of the *mescal* shops, smoking their soothing cigarettes, made by rolling a pinch of tobacco in a piece of corn-husk, and apparently supremely happy. But I missed the picturesque "zarape" and the many colored blanket of cotton or wool, and the sweeping sombrero, wide as a phaeton wheel, and banded with snakes of silver bullion. Through the ancient street of the old pueblo—the main street of the town—there passed and repassed a motley aggregation of quaint people, Papago Indians, "greasers," half-castes, Mexicans and American ranchers, herders and cow-punchers. You must be careful here, for it is yet early in the forenoon, and the street is filled with horses, mules and burros loaded with wood or garden truck for the market and dealers, and with tawny-complexioned men and women carrying huge loads on their heads and followed by bare-footed children and half-starved and wild looking mongrels, first cousins to the sneaking coyotes of the Sierras.

The sure sign of racial absorption comes when a people begin to adopt the diet and cooking of the foreign element with whom they must live and with whom they must associate, at least commercially. To test how far this process of assimilation and incorporation had already advanced among the Mexicans, I dined to-day at one of their restaurants. Fortunately or alas! it was the same

familiar and palatable meal I had so often sampled in the inland towns of the neighboring republic. Beginning with "soppaseca" or vegetable soup, I had my choice of one or all of the dishes of "enchiladas," "tamales," "tortillas;" plates of "frijoles" and "chile con carne" seasoned with "chile Colorado" or any other kind of pepper. The dessert introduced "dulces," coffee or chocolate, cheese, cigarettes and Chihuahua biscuits. Evidently after fifty years of occupation the absorption of the Mexican by the Anglo-Celt is yet in its intial stage in Tucson.

The "enchilada" and the "tamale" are of Aztec origin. The enchilada is a cake of corn batter dipped in a stew of tomatoes, cheese and onions seasoned with pepper and served steaming hot. The tamale is made from chopped meat, beef, pork or chicken, or a mixture of all three, combined with cornmeal, boiled or baked in husks of corn. These dishes, when properly prepared, are delicious and are gradually finding their way to American tables and restaurants. Cooked as the Mexicans cook them, they would be a valuable addition to the admirable menus of our eastern hotels.

After dinner I visited the half acre of ground which was at one time the "God's acre," the last resting place of the early "comers," many of whom died with their boots on. In those days—1855 to 1876—the Apaches swooped down from their mountain lairs, and attacking the suburbs of the town and the neighboring ranchos, killed the men and boys, drove off the cattle and carried back with them the women and children. As I may have to deal some other time wth this extraordinary and crafty tribe and fierce race of men, I will say here, only in anticipation, that the Apaches of Arizona were the

shrewdest and most revengeful fighters ever encountered by white men within the present limits of the United States. Fiercer than the mountain lion, wilder than the coyote he called his brother, inured to great fatigue, to extreme suffering of soul and body, to the extremes of heat and cold and to bearing for days and nights the pangs of hunger and thirst, the Apache Indian was the most terrible foe the wilderness produced. In those early days this neglected piece of ground, "where heaves the turf in many a mouldering heap," recorded the history of the pioneer days of the American Tucson. The headboards marking the graves informed the visiting stranger that this man was "killed by the Apaches," this one "died of wounds in a fight with the Apaches," this other "scalped, tortured and killed by the Apaches," and—this family in the little corner of the graveyard—"this whole family, wife, husband and six children was wiped out by the Apaches." But these days are gone forever; the Apache is imprisoned on the reservation and we may safely say of him what Bourienne said over the grave of Bonaparte, "No sound can awake him to glory again."

To-day, with a population of 17,000, and a property valuation of many millions, this city is the social and commercial oasis of Arizona. The city is well supplied with churches, schoolhouses and public institutions. The Carnegie free library, erected at a cost of $25,000, is surrounded by well kept grounds; it faces Washington park, the military plaza of the old Mexican presidio, and the largest public park in the city. The Sisters of St. Joseph look after the parochial schools, have a very fine academy for young ladies and conduct one of the best hospitals of Arizona. There are twelve hotels in the

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"WHITE EAGLE" AND "THE PUMA" APACHES ON PARADE.

city and, one of them, the Santa Rita, is architecturally one of the most novel buildings of the southwest. It is named from the Santa Rita range of mountains and forms, with San Augustin's Cathedral, the most imposing structure in Tucson. The city council is experimenting in street oiling, not sprinkling the streets with oil, as in San Diego, southern California, but soaking them, so that the fine triturated sand forms with the oil a fairly durable and smooth surface.

On these same streets one is always running up against some interesting and peculiar varieties of the Noachic stock. Here are Chinese in quest of the elusive dollar, stage ghosts in Oriental dress, quiet, unobtrusive, always looking down on the dust as if examining the minute particles entering into the composition of their material selves, and apparently doing a "heap" of thinking; here, also, is his cousin germain—the gentle and innocent-looking Papago or Pima of the mysterious aboriginal race, sun-scorched and wind-tanned with long coal-black hair and keen snake-like eye. He is in from the reservation of San Xavier del Bac, nine miles south of here, asking a dollar for a manufactured stone relic worth 10 cents. The sons of Cush, the Ethiopian, monopolize the lucrative trade of shoe blacking, guffaws and loud laughter. Varieties of the Caucasian race—rare varieties many of them—half-breeds, mulattos and Mexican half-castes, all have right of way and use it on the beautiful streets of Tucson.

CHAPTER XXIV.

CAMP OF THE CONSUMPTIVES.

From the balcony of my hotel I looked away, the morning after I came to Tucson, to the northeast, where just outside the city limits, row upon row of white tents break the monotony of gray sand, mesquite and "grease" bush. Here on the desert, protected from the winds on every side by barriers of porphyritic mountains, is pitched the tented city of the consumptives or "lungers" as the rougher element around here call them.

Here in this canvas-tented camp the victims of the "white plague" and those threatened by the monster gather from all the states of the East and form a community by themselves. The white canvas of the tents gruesomely harmonizes with the pale faces of the unhappy victims of the scourge. Farther away to the east I see white specks here and there on the foothills of the Catalinas. I ask a gentleman by my side what these dots are and he courteously answers: "These are the tents of the isolaters who wish to live alone and live their own lives in their own way."

To-day I visited the camp or reservation of the consumptives. I seldom carry a letter of introduction, for I am one of those who depend much upon an accidental acquaintance. As I go wandering through the world I see many a face whose mild eyes and sweet, placid features bespeak a gentle mind and a candid soul. Such a face as this is worth more than a dozen of letters of introduction, for written on it is the assurance of civility and kindness. In any case I knew no one here to whom

I could appeal for an introduction to any one in the camp. The tents are of cotton or ship canvas, with broad floors of "rammed" earth, or simply rugs laid upon the dry sand. They are of varying sizes, furnished and ornamented according to the means or tastes of the occupants. Most of them are divided into kitchen, living and sleeping apartments. In some, the gloom of the "living" room was relieved by the bright colors of a few Navajo blankets or Mohave rugs. In others were photographs of the dear ones at home, little framed titbits of western scenery, illustrated souvenir cards from European and eastern friends and caged California road-runners or Arizona mocking birds. Here also were earthenware jars called "ollas" holding water which cools by evaporation, banjos, zithers and guitars, lying on the table or suspended from the sides of the tents. Now and then you entered an apartment where an accumulation of Papago bows and arrows, obsidian tipped lances, Apache quivers and Moqui stone hatchets advertise the archaeological taste of the proprietor. Occasionally I entered a tent where the limited means of the owner or renter allowed him or her few luxuries. To be poor is not a disgrace nor ought it to be a humiliation, but there are times and places when to be poor—I do not say poverty—is very trying to the human soul and galling to the independent mind. Without money and a liberal supply of it no consumptive should come here. In the tent of the young man or woman of limited resources was a single cot, or perhaps two, an ordinary chair and a "rocker," a trunk, a small pine wash stand, an oil stove, a looking-glass and maybe a few books and magazines. Now and then the purest and gentlest of breezes merrily tossed the flaps and flies of the tent, and a harmless and

wondrously colored little lizard, called by the Mexicans "chiquita," coquetted with the magazines on the table.

The patients who are here taking the "air" treatment rarely enter the city. Every morning, from 6 to 12, butchers, milkmen, grocery boys and Chinese vegetable hawkers make the rounds of the camp and isolated tents. They are all here, the rich, the middling rich and the comparatively poor putting up a brave fight against an insidious, treacherous foe—"not so well to-day, but to-morrow, to-morrow, we'll be better"—always nursing the consumptive's longing and cherishing the "hope that spring's eternal in the human breast." "What's the percentage of the cured?" I do not know, I may only say that if pure, dry air can accomplish anything for diseased lungs, you have it here day and night abundantly. Neither Spain, Italy or Southern France may compare with Southern Arizona in dryness and balminess of climate, and I write with the knowledge of one who is familiar with the climates of these countries. I know not any place on earth better for pulmonary and nervous diseases than the desert lands around Tucson from November to April. Bear in mind I am not recommending any man or woman to come here in the final stages of disease nor any one whose purse is not large, deep and well filled, for druggists' and doctors' bills, groceries and incidentals are "away up" and almost out of sight.

The winter nights here are cool and bracing, and the early mornings sharp when a gasoline or oil stove is a most convenient piece of furniture. But from 8 in the morning to 4 in the afternoon every day in winter is a delight and the air an atmospheric dream. The summers are hot, "confoundedly 'ot," to use a Wellerism, when the heat will at times run the mercury up to 120

Fahrenheit. There have been weeks here in the summer when the thermometer would register 98 degrees day and night. But remember there would be only 20 per cent moisture in the air. In the eastern states such heat would wear down men and animals. A canvas tent of fair size costs anywhere from $60 to $100 or a tent may be rented including site for from $15 to $30 a month, counting in a little cheap furniture. People soon learn to do their own cooking, and after a time begin to live with reasonable economy. There is an electric road running from the camp to the city, the fare for the return trip being 10 cents. In this tented village are men and women of all ages, but chiefly the young and the middle aged who, in the words of the Psalmist, are "suffering hard things and drinking the wine of sorrow." It is very lonely here for many and wearisome, and this feeling of loneliness engenders a sadness which is often more fatal than disease, for the splendid air cannot reach it. Away from home and friends, the human heart craves companionship and those who at home are naturally reserved, and socially exclusive, here become companionable and invite conversation. For some, life here is very trying indeed; it is so lonesome, so monotonous to live, day by day, this life of sameness and unchanging routine unredeemed by variety and unblessed by pleasant association. This isolation bears in upon the soul; it tires of its own thoughts which, even if pleasant, carry a note of sadness. There are here and there in the camp human souls, imprisoned in their decomposing bodies, that are by nature melancholy and given to brooding. They become morose in their thoughts and drift into that pitiful condition described by the Royal Prophet when the sorrowful soul communes with itself and in

despair exclaims, "I looked for one that would grieve with me and there was none; and for one that would comfort me and I found no one."

The days are so long, so full of melancholy forebodings, of pleasant and unpleasant memories, of fears of dissolution and the hope of life; and after the day the wearisome night and intermittent slumbers, and even these broken with hacking coughs, with the dreaded chills and burning fever, and, perhaps, unwelcome dreams.

Here each human will is putting up a brave fight against treacherous and insidious foes, fiendishly cunning in their methods of attack. It is the combat of the body against millions of bacterial activities, of microscopic parasites, which, living, feed upon the lungs, and when dead poison the blood. In this unequal fight for life the soul is ever active, helping the body—its yet living tabernacle and beloved companion—with hope, with splendid determination, and whispering to it with unquenchable love, "What magnificent help this friendly air of Arizona is giving us." Then the body has another friend, severe, if you will, but a friend—the terrible cough, that racks the body with heroic determination to tear out the dead and decaying bacteria poisoning the human temple. And now,

"Swing outward, ye gates of the future;
Swing inward, ye gates of the past,
For the dark shades of night are retiring,
And the white lights are breaking at last."

The therapeutic air and loving soul are winning out. The cough is bidding good-bye to the body, its help is no longer required, the dreaded night sweats have van-

ished and the soul, rejoicing, says to its companion, "The battle is won; the field is ours."

In one tent, into which I was invited by the mother, reclined on the lounge her daughter, a fair young girl of 18 or 20. She sat up as we entered, and when I was introduced she courteously extended to me her hand, which left upon my own a sensation of wetness. Her conversation, address and bearing indicated a convent training and a cultivated mind. Her blue eyes, the fever flush on her cheeks, and her wealth of rich, auburn hair, sadly reminded me of the "Norman Peasant's Daughter," immortalized by the Irish poet, Thomas Davis:

"To Munster's vale they brought her
To the cool and balmy air,
A Norman peasant's daughter
With blue eyes and golden hair.
They brought her to the valley,
And she faded, slowly, there,
Consumption has no pity
For blue eyes and golden hair."

The tent erected to shield "from sunbeam and from rain the one beloved head," bore in its furnishment and decorations testimony that the hand which hung the etchings and photographs and the taste which arranged the rugs and furniture, were directed by a refined and cultivated mind. The young lady has been here but five weeks, and already is beginning to experience a change for the better. May she and her companion in suffering return home restored to health and to the possession of many years of happiness.

It is well to remember that Arizona is a very large territory—114,000 square miles—and that all of it is not to

be recommended for diseased lungs or shattered nerves. There are broad stretches of desert where the winds raise clouds of finest dust; there are towering mountains and startling canyons and gloomy ravines. There are sections of the land which exude baleful malaria, and places black, for miles and miles, with solid waves of lava, recording the elemental confusion of fire and steam and exploding gases in days gone by. But, I am told by those who have explored the territory—by pioneers of the early times—that the sand and gravel beds of the Tucson valley are ideal grounds for consumptives and neurasthenics, or people of shattered nerves. From what I know of other lands and other climates, I believe the pioneers are right.

CHAPTER XXV.

THE OSTRICH FARM AND THE SALTON SEA.

The American people live in the most wonderful of all lands, and do not seem to realize the glory of their possession. They cross oceans and girdle foreign countries in quest of strange scenes; they fill the art galleries of Europe to view the productions of the sculptor and the painter, when here, within their own domain, unseen and unappreciated, are marvels of nature baffling all descriptive art, wonderful creations of God challenging the pen of the poet, and the possibilities of the brush of genius.

While traveling through this wonderful territory I was asked if I had seen the ostrich farms on the Salt River valley. I had to answer that I had not, and in every instance I was urgently pressed to visit the feeding grounds of this strange bird before leaving Arizona. I came to Phoenix last week to enjoy a few days of indolent ease before starting for the wilds of Sonora, Mexico, and the hunting grounds of the terrible Yaquis, of whom you have heard. Not far from Phoenix there is an ostrich farm, where 1,000 birds are annually surrendering to the "pluckers" $30,000 worth of feathers and eggs. I am not going to inflict upon my readers any detailed description of the wired farm enclosing these 1,000 African birds, nor of the pens of the birds, nor the topographical features of the land, but will simply record what I have seen and learned of the ostrich at the colony I visited.

But first let me correct some mistakes and errors our story books and school books have handed down to us

about the ostrich and his habits. This singular bird, when pursued by man or animal, does not bury his head in the sand and suppose that, because the ostrich cannot see its enemy, the enemy cannot see it. The ostrich, when in condition, can out-run and out-dodge almost anything traveling on two or four feet. This was well known to the ancients, for the Patriach Job instances the fleetness of the ostrich in proof of God's kindness: "For, if God hath deprived the ostrich of wisdom, nor gave her understanding, when the time calls for it, she setteth up her wings on high. She scorneth the horse and his rider." When driven to close quarters and forced to defend himself, this extraordinary bird is a fierce fighter, and very few wild animals care to attack him.

She does not lay two eggs on the hot desert, hide them with a thin covering of sand and trust to luck or the sun to hatch them. She does not and cannot live for eight or ten months under pressure of great heat and feel no thirst. When compelled by circumstances, the ostrich can live a long time without water, perhaps a month or six weeks, but it cannot live, as one of our encyclopedias tells us, a year without water. We always believed our story books and books of travel when they told us that the male ostrich, like our barn-yard rooster, always strutted around, escorted by eight or ten wives. The ostrich has but one mate, and, if the female dies after they have lived together for some time, the male bird is inconsolable and will sometimes pine away and die. The average life of the ostrich is 75 years, but after twenty-five years they bear no feathers of commercial value.

The writer of the article in the encyclopedia, which I

mentioned above, says the ostrich lays only two eggs a year, and that the female plucks out the feathers of the male twice a year. The African ostrich may do all these things, but his descendants now in California and Arizona have abandoned the habits of their primitive ancestors and have conformed to modern conditions. The ostrich lays from twelve to sixteen eggs in a shallow hole, which the male bird has scooped out in a place convenient for hatching. They are large eggs, and, for forty-two days, the birds cover them alternately, the male by night and the female by day. By a mysterious law of adaptation, the color of the female, when brooding, is that of the desert sand, while that of her mate, which sets upon the eggs at night, is pitch black. This marvelous provision of nature helps to conceal the birds during the period of incubation from the eyes of prowling enemies. The chicks, when hatched, after a few days, are taken from the parents and confined in pens, where they are fed, and, until they can forage for themselves, raised by hand. If this were not done, many of the young birds would perish, for the parent ostriches seem to be indifferent to the fate of the little ones after they are hatched. It is to this apparent callousness of the ostrich the Patriarch Job alludes when he says, "She is hardened against her young ones as though they were not hers;" and the Prophet Jeremias, when he compares the ingratitude of Jerusalem to the indifference of the ostrich to her young: "The daughter of my people is cruel, like the ostrich in the desert."

The young birds are delicate when they come from the shell and demand careful treatment until they are six or seven weeks old, when they become independent, take a firm hold on life and hustle for themselves. A two-

months-old chick is always hungry, he is pecking and eating every moment he is awake, and will devour more food than a grown bird. They grow fast, gaining a foot a month in height for six or seven months. Some of the birds on the Salt river farms are eight and nine feet from the head to the ground, and weigh from 400 to 500 pounds. Some one has said that facts are sometimes stranger than fiction, and in the wonderful provision made by nature for the perpetuation of the ostrich, the saying becomes an aphorism. The first three eggs laid by this singular bird are sterile and will not hatch. By a wonderful law of instinct, or call it what we will, the mother lays these eggs outside the nest. There is a deep and mysterious law of nature compelling the bird to follow this command of instinct. On the African deserts, when the nesting time draws near, the birds retire into the most lonely and unfrequented parts of the solitary and desolate region, far away from the haunts of beast and man, and from water. Now when the little creature, the chicken, is liberated from its prison by the bursting of its walls, it is very thirsty and craves for water or anything to slake its thirst. But there is no water. The mother looks upon its gasping offspring with its tiny tongue protruding, carries it over to where a sterile egg is lying in the sand, breaks the shell, and at once the little perishing creature buries its head in the opened egg, sucks in the liquid refreshment and lives. The next day the little thing staggers by itself to the wonderful fountain of the desert, and the day after it is able to walk straight upright to the well.

On the ostrich farms or alfalfa ranges of Arizona, the young birds are taken away and raised by hand, the barren eggs gathered by the keeper and sold for $1.00

each. There is another very singular thing about the wonderful knowledge, or instinct, of the ostrich. If an egg is removed from her nest while she is hatching, and a sterile egg, heated to the same temperature as eggs on which she is setting and of the same color and size substituted, she will at once detect the change and roll the egg out. If all the eggs in the nest be taken away and sterile eggs put in their places, the mother will abandon the nest and lay no more for months. If you ask me for an explanation of the origin of this marvelous and mysterious sense, I can only answer in the words of the inspired writer: "This is the Lord's doing, and it is wonderful in our eyes."

About fifteen eggs is the average "setting," and the period of incubation forty-two days. The male bird takes upon himself the heavier labor of the contract. He takes charge of the nest and assumes control of the work at 5 o'clock in the afternoon, and stays with his job 'til 9 o'clock in the morning, when the female relieves him. At noon he returns and keeps house for an hour while his partner goes for her lunch. The male bird turns the eggs once every twenty-four hours. Incubators have been lately introduced and are giving satisfaction. The chicks, when two weeks old, sell for $25 each, and when four years of age a pair, male and female, sell for from $400 to $600.

The birds do not differ in appearance until they are eighteen months old, at that age they take on an altogether different plumage; the male arraying himself in black and the female in drab. When six months old, the birds experience the sensation of their first plucking, and after that they give up their plumes every eight months. Not until the third plucking do the feathers

bring much in the market; the first and second pluckings selling for a few shillings. A healthy ostrich will yield $30 worth of feathers every year for twenty-five years, though the average life of the bird is seventy-five years. Many hundreds of young birds roam over alfalfa fields enclosed with wire netting. Breeding pairs are confined in a two-acre enclosure. The range birds feed, like cattle, on alfalfa grass, picking up quartz pebbles which are scattered over the fields for their use, and which, for them, serves the same end as gravel for hens and chickens. When the hens are laying they are given, from time to time, a diet of bone dust to help in strengthening the egg shells. One of the most singular and interesting habits of the ostrich is his daily exercise. Every morning at sunrise the herd, two by two, begin training for the day by indulging in a combination cake-walk and Virginia reel. Then in single file they race around the pasture till they are thoroughly limbered up. When halting, they form in squares and begin to dance, introducing imitations of the waltz, negro break-downs, cake-walks and hornpipes. It is a laughable and grotesque performance, and, when the birds are in full plumage and their wings extended, not devoid of grace and beauty of action. The ostrich is the ornithological goat. He will eat and digest anything. Offer him a large San Diego orange, and he'll swallow it whole. Grease an old shoe with tamarind oil, throw it into the paddock where the birds feed, and at once there is a struggle for its possession, ending in the complete disappearance of the brogan in its entirety or in fragments. The salvation of the ostrich are its plumes. His feathers have saved him from the fate of extinct birds and animals like the great auk and the Siberian mammoth. He is destined to

last to the end of time, or to the effacement of vanity from the heart of woman—a weakness of the sex which began with time and will only end when time shall be no more. He is the only bird or animal that can live and be healthy on grass, grain, fruits, vegetables, fish, flesh, or leather.

A few weeks before coming to Phoenix I was told that the great Colorado river broke away from its own channel, was filling the Salton Sink, and threatening to eventually destroy the homes and farms of 12,000 prosperous settlers. When I reached Yuma, this morning, I learned for the first time that, if the river was not turned back, an inland sea would form, and the climate of southern Arizona and southeastern California change.

North of the Mexican boundary is a splendid tract of land known as Imperial Valley, homesteaded by 10,000 families. The chief towns—Imperial, Holtville, Heber and Brawley—are all now thriving and prosperous. South of the border is an area of land equal to that of Imperial valley in fertility and productiveness, belonging to the Colorado River Development Company. The principal canal of the great irrigating system leaves the Colorado river a few miles below Yuma at an elevation of 100 feet above the sea, and crossing the Mexican frontier, flows eastward into Imperial valley. The town of Imperial, almost in the center of the valley, is sixty-two feet lower than the ocean, and the grade continues to fall till at Salton Sink it is down to 287 feet below sea level. This decline gives a rapid current to the flowing waters, and the opening in the river bank has grown so wide that it will take much time and millions to close it. If the break be not repaired, the Imperial valley and the entire Colorado desert of southern Cali-

fornia up to the ancient beaches on the inclosing mountains, will become submerged and a great lake formed at the end of twenty years. So, at least the engineers of the Southern Pacific and the hydrographers now here assure me.

The new sea now forming in the desert lands of Arizona, Mexico and California is one of the most extraordinary assisted natural phenomena of modern times. It has changed the course of one of the greatest rivers of the West, has forced one of the greatest railroads in the world to move back, and back and back again, is converting a desert into an inland sea, may possibly change the climate of a great territory, and even involve two friendly nations in diplomatic controversy.

Back of all is the sinister suspicion that behind the opening is a deep-laid plot to acquire by purchase from Mexico an important slice of Lower California. This suspicion has probably reached the ears of the President, who is above trickery and treachery, and may account for his "rush order" to Mr. Harriman of the Southern Pacific to "close the breach; count not the cost, but close the breach." It will be closed.

This morning I sailed over the ruins and roofs of some of the buildings of Salton Sink, where a few years ago were the greatest salt works and evaporating pans in America. Where three years ago there was a desolate and forbidding wilderness, there is now a lake twenty-three miles wide, fifty miles long, in places forty feet deep and forced by the inrush of the waters of the Gila and Colorado rivers, is rising nearly one inch every twenty-four hours. The break is in the banks of an irrigating canal a few miles south of Yuma, Ariz. Three miles above this town, the Colorado opens its side and

takes in the Gila river, and from there the flow sweeps on 100 miles to the Gulf of California.

Possibly the most ambitious attempt at irrigation of arid lands ever undertaken by private enterprise was that of the California Development Company, which promised its shareholders to irrigate, by gravity, from the Colorado river, 800,000 acres of desert land, one-fourth of which belongs to Mexico. The company was capitalized at $1,250,000. This company began operations in April, 1897, and in six years villages and towns sprang into life, and where a few years ago there was a desert, there are now fertile farms, orange and lime groves and comfortable homes, occupied by thousands of industrious and contented people. A canal, called the Alamo, was dredged from the Colorado through the sand lands, and from this canal, by auxiliary ditches, was furnished water for irrigating the farms.

When the Colorado river was low, the canal was sluggish in its flow, the channel and subsidiary trenches filled with silt, and the settlers became clamorous. Then the company opened a second intake, known as the Imperial, which connected the Colorado with the Alamo canal. Here, and now, is where the trouble begins. Neither sufficiently strong nor perfected headgates, wing-dams or bulkheads were constructed, and, when, in the spring of 1903, the Colorado, swollen from mountain and tributary streams, came rushing to the sea, it swept the artificial works aside and entered upon its present career of devastation.

About this time a series of sharp, quick and rotary earthquakes rocked the country and opened a gash in the Colorado above the Imperial weir. From this opening the waters poured into what is now known as the

new river, and onwards, almost due north, to Salton basin, seventy-five miles away.

Salton Basin was a vast depression in the earth's surface, sinking from sea level to 287 feet below. It widened over two counties of southern California and stretched well into Mexico, forming a huge depression between well defined "beaches" of an ancient sea, and covered an approximate area of fifteen to forty miles wide and about 100 miles long. There is no doubt but that at some time in the past this sunken desert was an extension of the Gulf of California.

From a point near the boundary line to the gulf, a distance of about eighty-five miles, lies the delta of the Colorado, a rich alluvial plain of great depth, equal in productivity to the delta of the Nile; a vast area, apparently as level as a table, built up by the Colorado river, that has drawn its material from the plains of Wyoming, through Green river, and, adding to it all down through Colorado, Utah and Arizona, deposited it on the new land it was forming at the end of its flow.

This is the first time in its history that the Colorado has changed its course, and all efforts of men and money of the great Southern Pacific and the giant irrigation companies have failed to coax or force it back to its natural bed. A river that has flowed on through the ages, laughing at all obstacles, tearing the hearts out of opposing mountains and ripping for itself in places a channel a mile deep, and, in places, leagues wide, is not going to be turned aside easily. Great is the strength of the Southern Pacific; enormous is the power of corporate wealth; cunning is the brain and deft the hand of the American, but as yet the strength of the Southern Pacific, the power of corporate wealth, combined with the

shrewdness and clearness of the American brain, have not been able to subdue that turbid, treacherous, sullen river, the Rio Colorado.

Three times, at a cost of a half million of dollars, the Southern Pacific has wrenched apart and moved back its trunk line, twenty, thirty, and now, through a cloud of profanity, seventy-five miles from its lawful bed. Already Salton, with all its buildings, its vast evaporating pans and improvements, is submerged, and fertile farms and ranch lands are destroyed, it may be, for all time. The towns and improved lands of Imperial valley, the grazing lands of the Pioto region of Lower California, Mexico, and millions of dollars invested in railroad and other valuable securities are threatened, and to save them may call for the co-operation of two nations and the expenditure of an enormous sum of money. The whole territory, from the Chuckawalla mountains and far south of the Mexican frontier, is menaced with annihilation.

Unless the inrush of the Colorado is checked, it is very probable that the Salton sea and the Gulf of California will again form one great body of water.

This means that the inland desert will become a great gulf where, a few years since, there was a field of sand 120 miles from the sea.

Thus, sometimes, do natural phenomena, in time, make for the prosperity or decadence of a nation. In spite of evaporation, the profanity of the Southern Pacific shareholders, and the herculean attacks of 2,000 laborers, led by expert hydraulic engineers, the inland sea is widening, for the waters of the great river are rushing to its assistance at the rate of 8,000 cubic feet per second. This is the volume at the lowest stage of

the water; the spring freshets will swell it to 50,000 feet, for that is the average high flow of the river.

At present the new inland lake is a beautiful sheet of water, and is a never failing source of wonder to Eastern tourists after crossing hundreds of miles of arid wastes, of sand, greasewood and cactus. To the west, from the fond-du-lac or foot of the lake, tower the snow-capped peaks of Mount San Bernardino and Mount San Iacinto, each about 12,000 feet high. For ages the Bernardino has held the restless, crawling sands of the thirsty desert which scorched its foothills, and at last the cool waters have come and rippling waves play with its foundations. Facing Salton—or what was once Salton—the sea is about twelve miles wide, and the mountains, rising majestically to the west, mirror themselves on its placid surface.

Here, in Yuma, they tell me the temperature was no higher than usual last summer, yet the heat was the most oppressive in the history of the place. They attribute this oppression to the Salton sea, and dread the approach of June with a much greater area under water.

Whatever the outcome of this continuous inundation may be, if not arrested, whether the present waters join the gulf or an inland sea is formed, a remarkable climatic change is sure to occur, and, indeed, is now in process of evolution. For the past year, more rain has fallen in and around Yuma than in the last five years, and sections of land that were formerly a wilderness of shifting sands are now blossoming like a garden. Here before our very eyes is the verification of the prophecy of Isaiah: "The land that was desolate and impassable shall be glad, and the wilderness shall rejoice and shall flourish like a lily; it shall bud forth and blossom and shall rejoice with joy;

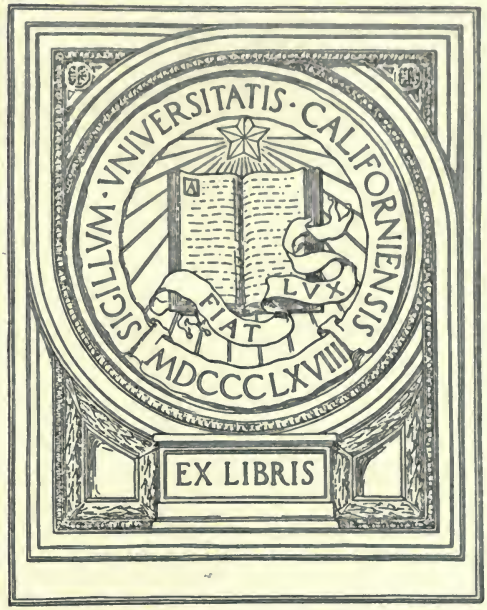
the glory of Libanus is given to it; the beauty of Carmel and Sharon."

The vitality of desert seeds is imperishable, and, like the peace of the Lord, surpasseth the understanding of man. There are places near here, now bright and green with flowers and grasses, that a few years since were wastes of land, and from immemorial time scorched with hopeless sterility. Since "the waters have broken out in the desert and streams in the wilderness," the face of this region is taking on the look of youth, and the land a competitive value.

At Salton the water is as translucent as the sea at Abalone, and is even more salty. It seems almost uncanny to cruise about in skiffs and launches over places which, a while ago, were barren lands, and over homes where people lived.

At the present time two great forces are battling for the mastery of a territory as large as the state of Rhode Island. On the one side is the Colorado river that has never been controlled by man; on the other is a powerful irrigation company, supported by the genius and resource of a great railroad corporation. There are indications that they may retire from the fight and run for the hills, leaving the governments of the United States and Mexico to engage the monster that threatens the annhilation of Imperial valley and its thousands of cultivated acres and prosperous homes.

THE END.



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